

CONTEXT PAPER

(Draft 6: A Distillation of All Previous Drafts)

E. Christopher Mare

Whole Systems Design

Antioch University Seattle

Spring 2002

Table of Contents

The Greater Context – Page 3

The Historical Context – Page 9

The Graduate Design Project – Page 17

Fundamentals of Village Design – Page 24

Design Criteria – Page 36

Epilogue – Page 44

References Cited – Page 51

Let us envision Utopia and thus bring it into existence.

There is no other reasonable alternative.

~ Willis Harman (1984)

The Greater Context

This Context paper is a procedural ‘process paper,’ an essential step in the Antioch University Seattle, Whole Systems Design, Individualized Master’s degree program. In this paper I will pronounce and enunciate the important theories, philosophies, sources, and lines of thought that have significantly influenced my education to date and that will inform the epistemological and experiential base for subsequently developing a “Graduate Design Project,” the culmination of my degree. The specific content and tone of this paper is an outgrowth of and direct response to a decisive (and procedural) “Convergence Question” formulated at an earlier phase in the degree process. That question, revised and updated to accord with the perennial growth that has occurred since that time, can be stated thus:

How may I use my education and my unique acquired experience, skills, perspective, and understanding to beneficially, constructively assist and influence the healing of the planet and the spiritual regeneration of humanity while concurrently providing prosperity and healthful abundance for myself and my intimate others?

I have taken the opportunity to use this procedural question to articulate my deepest aspirations within the context and format of a formalized educational experience. In this way, I make no distinction between ‘education’ and ‘life’s work’ – at this point in time they are synonymous. As a matter of intention, I choose to ground both in ultimate spiritual concerns: I believe the Earth and all Her creatures (including me) are in need of some real healing.¹

The Convergence Question is serving as an ‘attractor,’ a germinal conceptual formulation projected into a future hypothetical space-time scenario with the potential power to magnetically pull and align events and situations around its impressionistic pattern. It is a ‘seed statement’ planted into the fertile ground of perceived planetary evolutionary necessity. It is an inquiring, supplicating call to the Universe requesting a purposeful and fulfilling niche from where I may contribute meaningful service to the needs of the Whole, the greater Life of which I am a part.

And how does the Universe respond? If I sit quietly, close my eyes and still my mind, I can hear the response as a verbalization in my head:

¹ Since the word ‘spiritual’ can arouse sensitive feelings, I wish to qualify it with a definition relevant to this Whole Systems Design context: In this paper, ‘spiritual’ means “consciously contributing to the health of the greater Whole,” or “fostering the evolutionary potential of Earthlife.”

Follow you bliss! Incite your passion! Consummate your dreams! For it is in the joy of becoming, of wholesome individualized self-actualization that, paradoxically, one can most readily, beneficially, constructively contribute to the needs of the Whole.

Indeed; I can accept that: It is the very trajectory of evolution!²

The bliss, the passion – the *joie de vivre* – are e-motive energies that can propel a sustained effort and see it to completion; they have the potential to stimulate, arrange, and impress upon the mosaic of reality, molding it towards a desired image. They instill the surrounding atmosphere with ever-renewing, ever-revitalizing enthusiasm. They can, ultimately, determinedly influence the eventual outcome of any effort in a positive way.

By consciously moving toward the fulfillment of one's own 'dream,' one's most precious desire, the Whole becomes that much grander, that much more beautiful, vivid, expanded and complete – enhanced creative living potential becomes available for everyone. This is especially true when one's dream, one's most heartfelt vision, happens to be attuned to and synchronized with the e-motive energies of the vision of others – a magnificent, powerful, *collective* vision results. When this larger, more-inclusive vision is in turn co-evolving somehow with the *needs of the still **greater** Whole*, so that a vital function is being filled, then real magic is possible, then evolution can proceed in leaps and bounds. Such is the state of the current global "ecovillage" momentum.

My own dream is to one day live in an ecovillage of my own (co-)design: a first-rate, world-class, pioneering, enlivening, enriching, impeccably conceived, holistically integrated, primordially patterned, model ecovillage embodying all the characteristics I have learned and imagined in the course of my education. This ecovillage will be the home for my 'tribe,' where we will carry on the work of contributing to and fostering salubrious planetary evolution by consciously, cooperatively, purposefully co-evolving with this greater Whole, the living essence of the planet Earth. The ecovillage-home will be also, by design and by necessity, a school, an educational setting for experimenting with creating the patterns, processes, and structures of a truly sustainable culture and expanding the limits of untapped, unrealized human potential.³

My supernal bliss, my indefatigable passion, is animated and stirred to life with the envisaging, conceptualizing, and fore-designing of this future ecovillage-home-school.

² Erich Jantsch, in *The Self-Organizing Universe* (1980), describes how organic evolution is forever moving and pressing forward in the direction of ever more detailed, specialized, highly refined and individuated, exploratory forms and functions, the perpetual ramification of the evolutionary Tree. Any of these novel manifestations, however, will remain viable in the long run – that is, will be *sustainable* – only if it supports and supplies a necessary service to and for the Whole.

³ At this stage, considering the greater ecovillage vision as the 'supreme solution,' all current ecovillage models-in-process are indeed schools, and any future design project scenario needs to be shared as a real, practical educational experience for those who are interested in learning.

There is so much to think about! There are so many angles to investigate and subjects to explore. I have arrived at the conviction that it is within these exemplary, truly sustainable communities (one might say metaphorically, ‘vibrantly fertile wombs’) that the spiritual regeneration of humanity will be birthed, and from where the healing of the planet can proceed with fervid potency. This is no small matter.⁴ I believe this is the most crucial challenge facing humanity in the current era: learning how to design and bring forth these idealized yet perfectly natural living situations. For the sake of convenience I call them ‘ecovillages:’ this is the most useful and readily communicable term I have found so far to illustrate the ideal living situations I have in mind. Perhaps another term (or more likely, an assortment of terms) will appear at some point.

All of the above could be considered the ‘greater context’ of this Context Paper. The underlying motif addresses the mythical poetics, the systemic semantics, and yes, the spiritual motivation that has been the fountainhead of my education. In effect, from one perspective, the self-perceived purpose of my self-designed education has been to discover, integrate, synthesize, translate and re-articulate the philosophies, theories, sources, and lies of thought – compelling and irrefutable evidence – that can be used to provide substance to support these convictions and aspirations. While very personal and somewhat ethereal, I have chosen to preface this Context Paper with this greater context in order to convey to my Degree Design Committee the inspirations that have brought me to this point, now, of having the opportunity of outlining design considerations for a proposed Graduate Design Project in this Whole Systems Design Master’s Degree Program at Antioch University Seattle. This event, too, is no small matter, for me especially, as I am the first person in my immediate family to have pursued a degree of any kind. A concluding section of this paper will enumerate the generic design considerations.

But first, as a warm-up, I must outline what has been variously called a “basic model/theory of praxis/conceptual articulation” from which the Graduate Design Project may emerge. This outline is intended to be a direct response or answer to the Convergence Question and, in its fullest implications, can be regarded as the initial framework upon which a desired professional livelihood may eventually be constructed. And so, one more time, here is the Question:

⁴ This discussion is aligned with the vision of Sri Aurobindo, a yogi-philosopher committed to natural and human evolution, as described in the compilation *The Life Divine*. Sri Aurobindo founded the UNESCO-sponsored settlement “Auroville” in India to serve as such an “incubation chamber” (my phrase). Auroville has grown to house some 1677 residents as of 4 March 2002, and is a prominent ecovillage in the Global Ecovillage Network – though just one class of ecovillage among many.

How may I use my education and my unique acquired experience, skills, perspective and understanding to beneficially, constructively assist and influence the healing of the planet and the spiritual regeneration of humanity while concurrently providing prosperity and healthful abundance for myself and my intimate others?

I've made it no secret: the entire thrust, purpose, focus, intention of my education has been to understand and provide an academic perspective to this emerging vision "Ecovillage Design." That's what I want to do: design ecovillages. But how do I go about doing that? My vision of an ideal ecovillage is not necessarily shared by all. And how do I use this formal, self-designed Master's education and the associated time of relatively contemplative leisure to prepare for that possibility?

Since there is currently no established accredited degree program for this emerging field, much of my work has been to pioneer or forward a conceptual model of *what such an academic program would look like*: What would be its contents? How would it be arranged, designed, presented, etc.? In other words, what do aspiring Ecovillage Designers need to know and understand before undertaking their work? All the subjects, themes, titles, and courses of study I have chosen in my self-designed degree were meant to fill in and meaningfully answer these questions. In effect, I have been participating as I go along in a *proto-curriculum of my own design*. And it is just that: just one possible proto-curriculum, derived from my own subjective interpretation of what this new field comprises. As this paper proceeds, evidence will mount suggesting that continuing this kind of work may very well be a form of eventual professional life, and more immediately, the answer to my Convergence Question.

And so, what I will articulate now, as the antecedent to more specific design criteria, is, in a very real sense, a conceptual model of a conceptual model – a *meta-model*, if you will – of an education preparing one for becoming a competent Ecovillage Designer, with all that implies. That is the answer to my Convergence Question: the best way to have manifest all those expressed and wished for conditions I described, at this point in time, is to offer and present a meta-model of a formal and accredited education devoted to this emerging and still loosely defined field of Ecovillage Design. That is what I want to concentrate on in my upcoming Graduate Design Project.

This all fits very nicely with a strategy I have been developing for achieving that ultimate goal: to be living in an ecovillage of my own (co-)design. According to this strategy, at the center of every new emerging ecovillage is an *Ecovillage Design School*. The school prepares students for the task of designing ecovillages by actively engaging them in a *design-in-process*. Students come through the school and participate in the ongoing design of the ecovillage *as it is unfolding*. Details will follow, but first here is a 5-point basic conceptual model of such an Ecovillage Design education:

- 1) It must be equally balanced between theory and practical application; the theory informs the application. Designing of ecovillages cannot take place in a separate office somewhere but must occur right there on site. It is very important that the designers know and feel the site intimately, through all its diurnal and seasonal vagaries of nuance. It is also important to have the opportunity to practice the implementations of designs right there in the milieu in which they are being conceived. But effective design can't begin until a firm comprehension of fundamental principles has been integrated – and these principles must be introduced in graded steps. Similarly, the design of the ecovillage can't take place all at once but must proceed in graded steps. And so, in the basic theoretical conceptual model, I have an image of introducing broad, all-inclusive fundamental principles first, followed by practice of those principles, then gradually introducing more specific principles followed by ore specific practice, and so on. This process could continue until an in-depth, comprehensive, 'whole system' knowledge base has been developed.
- 2) The meta-model must be broadly multi-, trans-, and inter-disciplinary. Ecovillage Design, in its full implications, is a vast subject. A competent Ecovillage Designer will need to be able to access and apply information and understanding from across numerous disciplines, at times simultaneously. This information and understanding will need to be re-ordered and synthesized into a new coherent whole applicable specifically to the designing of sustainable human settlements. This makes the Ecovillage Designer a specialist of 'pointed generalities,' a 'jack of all trades,' an holistic interpreter of multifarious pertinent discipline sources. The Ecovillage Designer will be continually referencing and cross-referencing a vast knowledge base yet gleaning only that which is constructive or useful to the particular task at hand.
- 3) The meta-model must be grounded in a 'theory of praxis' that articulates effective design as an obvious outgrowth and imitation of an understanding of the living processes of Nature. By definition, the whole purpose of an "Ecovillage Design" is to reintegrate the human project back into Nature, at settlement scale, and in so doing ensure that is sustainable – that is, able to be continued into the indefinite future. Nature is the true teacher in this kind of school. Ecological Design, Permaculture Design, Ecovillage Design, even Whole Systems Design – they are all attempting to do just that: mimic effective design applications after the patterns, processes, and structures found in Nature. By conceiving and implementing these kinds of designs, the practitioners assist the 'healing of the planet' in a very practical and constructive way.

- 4) A vital component of the meta-model I have been developing is the application of principles articulated in Living Systems Theory. All living systems are primordially *self-organizing*, meaning that there is no outside agency doing the organizing. It is my thesis that in order to be truly sustainable, an ecovillage must be modeled upon Living Systems Theory – in effect becoming a living system itself – and thus be designed to be *self-organizing*, with all that implies. I explore this conclusion in some detail in a subsequent section of this paper entitled “Fundamentals of Village Design.”
- 5) The meta-model, the basic conceptual model I am outlining now as a response to the Convergence Question, must be grounded in *community*. Without real community – without a supportive and sometimes critical core of like-minded, interdependent others – all this theorizing about educational conceptual models becomes so much blabbering in the wind, Community is the base, the source, the context, the process and the goal. In the all-important Question, I make reference to “the spiritual regeneration of humanity.” That’s what all this work is focused toward, in my interpretation: providing those vibrant, thriving living contexts in which human beings can discover (or rediscover) their essential nature and realize their full potentials. These ideals cannot be actualized as isolated individuals but must come to fruition in the communion of others. That is an important aspect of this educational model, that it be grounded in community.

The rest of this paper is devoted to supporting and substantiating these generic components of this generic meta-model for an Ecovillage Design education.

As the next step, I wish to introduce and describe the associated historical context within which my particular education has unfolded and taken form – for it will be demonstrated that the very process by which I arrived at my conclusions, and the manner in which they developed, integrally and inherently (one might say genealogically or hereditarily) influence and inform any and all subsequent design considerations. This is the nature of organic evolution: it builds sequentially, segmentally, foundationally upon that which has been established previously, creating as it goes an ‘ontogeny,’ a unique individual course of development. The Project itself, I suggest, in true Whole Systems Design fashion, also will be intimately process-oriented and will be, like a fractal, a scaled-down, holographic representation of the holism that has been my formalized educational adventure.

The Historical Context

The logical place to begin the historical context that influences and informs the design considerations that will constitute the final purpose of this paper is with my first Permaculture Design Course (PDC) in the Spring of 1993, well before I began my formal academic education. Experiencing that course positively revolutionized my life, or more precisely, coincided with a revolution already in progress. During the introductory session of that course I had the overwhelming conviction that I had just discovered my life's work! There, I encountered for the first time an organized, systemic body of knowledge that clearly gave voice to all the various intuitions I had had concerning the nature of that slippery term 'sustainability' and the prospects for a slipperier 'sustainable culture.' The fundamental premise was presented so plainly and openly: *in order to be sustainable, human systems must be modeled upon natural systems.* Of course! What could be more obvious? As I would come to understand, this design precept can be applied at any system-scale; for example, for human settlements to be sustainable they also must be modeled upon natural systems. No pretense; no pedantry; just pure timeless wisdom.

That first PDC was a 'rite of passage' of sorts, an initiation into a global community seeking honest, practical, workable, organic, *perennial* solutions to the so-called sustainability crisis. It was as if I was given a new lens through which to perceive the world. The course initiated for me a fresh new attitude and approach to life with a sublimely regenerated sense of purpose: that of participating in the healing of the Earth. I eagerly began practicing and applying permaculture principles everywhere I could: First, I helped set up a large garden complex on Lopez Island with some friends. Then I worked at an internationally-renowned organic garlic farm in the Okanogan. From there I was asked to over-winter caretake a 40-acre piece up the Aeneas Valley. Then I had the distinguished opportunity to participate in setting up a Community Center in Tonasket, where I served on the Board of Directors and as resident building manager. All of this occurred within the first year of setting out on my inaugural exploratory permaculture adventure. These experiences were the complementary practical applications to the theories I had learned – a crucially important addendum for comprehension in this field. I worked fervently, assiduously, gratuitously, seeking above all to gain as much experience as possible, certain that recompense would appear in due time, in its own way (and it surely did!). Everything was progressing spectacularly. Soon, however, it became apparent to me that to meaningfully, effectively participate at the level I wished in this new permaculture vocation, I would surely need to get some formalized schooling; and so I enrolled.

That first EDC in 1993 could also be considered a ‘seed event.’ In a very real sense, the seed that was planted and successfully germinated then has been steadily growing and is flowering now into the blossoms of a Graduate Design Project at Antioch. This image is an accurate simulacrum, or representation, because all my subsequent work at University, for the past seven-and-a-half years now, has been an effort at embellishing, elaborating and expounding upon my comprehension and re-articulation of the fundamental principles I was introduced to then.

I arrived at Antioch directly after a richly rewarding undergraduate experience at Fairhaven College, Western Washington University, where I designed and completed the world’s first B.A. degree devoted explicitly to “Ecovillage Design,”⁵ a piece I titled *Village Design: Ekistic for the 21st Century*.⁶ This degree was essentially a proto-curriculum for an undergraduate major in this emerging field. The ecovillage was (and still is) very fresh, and there was no precedent yet for filling and encapsulating its vision within a (somewhat) formalized academic educational setting. So my achievement was both novel and exploratory – but there were, of course, initial guidelines to follow.

The ecovillage vision was first promulgated publicly in issue #29 of *In Context* magazine in the Summer of 1991. *In Context* had long been the vanguard of serious inquiry into the prospects for sustainable human culture, providing inspirational working examples of alternative solutions being practiced around the globe and theorizing the context for further developments. In issue #29, Robert Gilman, et al., provided the first, and still most useful (in my opinion) definition of an ecovillage. It is:

- A human scale
- Full-featured settlement
- In which human activities are harmlessly integrated into the natural world
- In a way that is supportive of healthy human development
- And can be continued into the indefinite future

I have kept this definition in mind as the authoritative standard to aspire to throughout my educational development and associated theoretical meanderings. It was a seed statement.

⁵ I suggested this in an article I was asked to write about my education for the Autumn 2000 issue of *Communities* magazine, and so far no one has disputed the claim.

⁶ ‘Ekistics’ is a term coined by Greek architect and planner Constantinos Doxiadis to define a scientific, multi-disciplinary approach to the study of human settlements. This is a very functional term and will reappear later in the body of this paper. To place “Ecovillage Design” within the greater context of “Sustainable Community Design” requires an ekistic analysis. This term is defined and articulated in great detail in the seminal work *Ekistics: An Introduction to the Science of Human Settlements* (1968) and later in *Ecology and Ekistics* (1977).

Concurrently in 1991, Context Institute released the report *Eco-Villages and Sustainable Communities*, a project sponsored by Gaia Trust. This was a book-sized document of 213 pages filled with biographical and categorical sketches of twenty-three of the world's most prominent, prototypical ecovillage models, including a wealth of information about ecovillage characteristics, ecovillage challenges, guidelines for ecovillage development, and the vitally important (and still too often neglected) connections between 'ecovillages' and 'traditional villages.'

Needless to say, the work of Robert Gilman and the Context Institute proved to be a goldmine for me and my nascent exploration, and provided the embryonic starting point for my conceptualizing Ecovillage Design as a comprehensive degree.⁷ I began my education in the Autumn of 1994; I discovered their work shortly afterward in the Winter of 1995, so it inceptively influenced my approach to the subject. I was so impressed I immediately ordered all the back copies of *In Context* for reference. I set about collecting a library based on the bibliographies that were listed. As I was just beginning the structuring of my Ecovillage Design B.A. degree, I thought the most effective, authentic, and durable strategy would be to study, learn, and integrate the foundation of their ideas and then elaborate from there. In this way, I could synergize my efforts with the cutting edge, global standard.

Ecovillage events were moving rapidly: In the Autumn of 1995, just one year after I began my formal education, the world's first conference on "Ecovillages and Sustainable Communities" was convened at Findhorn, Scotland – one of the world's premier ecovillage models. There, an international delegation was gathered to come to some kind of consensus on a collective vision and to co-ordinate efforts to see the vision's proliferation. From out of this meeting, the Global Ecovillage Network (GEN) was born, an organization with the expressed purpose of furthering the ecovillage vision by assisting new start-ups and providing a networking nexus for existing models. The establishment of GEN was a major watershed for the greater building momentum, for it provided a respectable, coherent, well-funded center for what was (and still is, by definition) a highly decentralized affair. Soon there were regional GEN offices set up for the Americas, for Europe and Africa, and for Asia and Oceania.

I applied to attend the Conference but there were many more applications received than spaces available. No worries, I made it to Findhorn just one quarter afterward, on an Independent Study in the Winter of 1996; and the place was still buzzing with excitement! I participated in their "Experience Week" and "Living in Community"

⁷ I believe that the Context Institute (1991) may have been influenced by the final chapter of the *Permaculture Designer's Manual* (1988), entitled "The Strategies for an Alternative Global Nation," where Bill Mollison introduces the idea of "village development" (not yet "ecovillage") within a bioregional organization as the obvious basis for a sustainable culture. The *Permaculture Designer's Manual* is where I was first exposed to this 'new village' idea that later became further and further refined as my education proceeded.

programs – then went on to spend a week at one of their Arcadian outposts on the isle of Erraid, near Iona. I cannot overemphasize how exceedingly valuable, how vitally important this learning experience was. Researching and reading about the ideas and projects may offer a preliminary glimpse of understanding, *but there is no substitute for actually being there!* Being present, one gains a sort of tactile understanding, a sensory bodily impression of what is working smoothly, what is well-designed, and what could use improvement and modification. By living, working, studying, and playing with the community right there in their milieu, one apprehends, appreciates, and becomes sensitive to the immensely significant social dynamics – the human-centered aspects – of an Ecovillage Design. After Findhorn, I went on to study at the Permaculture Institute of Ireland, a site that was then in the initial stages of development, and now, I understand, has been elevated to ‘ecovillage’ status.

I returned back to Fairhaven College filled with enthusiasm and new ideas for elements to include in my evolving Ecovillage Design degree. This experience initiated a pattern: I was to fly off from Fairhaven *four more times* in the course of my degree, visiting various sites around the globe and *experientially* learning the subtleties of what constitutes the essence of Ecovillage Design. I made it to Crystal Waters, Australia in the Autumn of 1996;⁸ I got to The Farm’s Ecovillage Training Center (ETC) in Tennessee in the Spring of 1997;⁹ I was invited to an Ecological Design School in La Rochelle, France in the Spring of 1998;¹⁰ and finally, I took a tour through Mexico and Guatemala to study Traditional Villages in the Winter of 1999.¹¹ In each case, I would egress from my home place to encounter and experience profound, transforming, “living-learning” experiences at high-energy locations around the globe, and then would return to my University to

⁸ There I took my second Permaculture Design Course, my first Village Design Course, and then stayed on to do some work trade. Afterward, I flew to Perth for the Sixth International Permaculture Conference and subsequent Convergence, and then finally ended up at Rosneath Farm, near Dunsborough, Western Australia, for some preliminary Ecovillage Design workshops.

⁹ There I took my second Village Design Course, and stayed on to experience The Farm’s first ever “Unity Festival.” At the ETC I discovered a disgruntled bunch of interns who were promised an educational experience but who were instead doing mostly grunt work. This gave me a sense of purpose with my academic efforts because it became clear to me that some form of *organized, accredited* educational experience was needed in an ecovillage setting, similar perhaps to the proto-curriculum I was developing.

¹⁰ This school was conceived, organized, and presented by Biosphere II chief architect and San Francisco Institute of Architecture professor Phil Hawes. This school was the most brilliant demonstration I have seen yet of setting up a Design Studio as an educational event to support comprehensive ecological design work on a specific site. I have been awfully influenced by Mr. Hawes’ Design Studio, and will emulate its format wherever and whenever I can.

¹¹ This was certainly an eye opening excursion for I began to understand corporeally the essence and necessity of ‘village’ culture as the primordial scale for ‘sustainable’ culture, or, that was the conclusion I reached. I also was able to rendezvous with GEN during one of their Steering Committee meetings at Huehucocoyotl, an *ecoaldea* in Mexico. There I met Ross Jackson, founder of Gaia Trust, and presented to him my Ecovillage Design portfolio and curriculum schematic. He approvingly conformed the work I had been doing and asked me to send a copy of the schematic to GEN headquarters in Denmark, for they also were working intently on developing an ecovillage education vision.

translate what I had discovered into college courses, practical learning activities, and further Independent Studies,

I savored this recoiling part of my education as well – the deeply reflective, intensive and extensive, researching, reading, and writing: there were so many fields to become familiar with! In the northwest corner of the USA, where I live, this process of meditative retiring introspection and concentrated disciplined erudition is greatly facilitated by the long, dark, cold, rainy season hemicycle. Through my ruminations, I came to conceive a formal Ecovillage Design education as necessarily a comprehensive, broad-based, inherently multi- and inter-disciplinary investigation, at its best equally balanced between theory and complementary experiential application, and ideally centered within an ecovillage-in-process. I laid put a template of a curriculum that included numerous diverse fields, subjects, and activities, categorically inter-woven and inter-referenced to form a coherent, functional, integrated whole.¹² This was essentially an act of Whole Systems Design before I became formally associated with the concept.

Of particularly significant influence in the designing of my B.A. degree – and still influential now as I approach the culmination of an M.A. degree – were the two “Village Design” courses I participated in: the first at Crystal Waters and the second at The Farm. The first was hosted by the newly formed GEN, with an international cast of both students and presenters alike. That course amounted to essentially an expository overview and description of the ecovillage models that already existed. It seemed that GEN was still searching for the conceptual and epistemological base from which to present their avant-garde ideas. The second course was hosted by a team from the *Permaculture Activist* magazine, intellectually headed by publisher Peter Bane. That course was much better conceptually organized, placing a strong emphasis on Human Ecology and the characteristics of Traditional Villages. Both courses, however, were firmly, unassumingly grounded in Permaculture; Permaculture is the foundation. After absorbing the lessons from these courses, I began to accept “Ecovillage Design” as a form of “Advanced Permaculture Design,” and both as subsets of the more-inclusive category “Applied Human Ecology” with a focus on sustainable human settlements. The second course, especially, influenced my further selection of subject titles back at University.

Once again, I cannot over-emphasize the value of actually ‘being there,’ of witnessing first-hand the antecedent and pioneering efforts of these very capable global innovators as they themselves were coming to terms with how to present this new ecovillage idea in a structured educational format. My personal involvement with and exposure to this budding source of inspiration has, of course, greatly influenced my characteristic approach to the subject throughout all subsequent years of education, right up to and including the design considerations for my upcoming Graduate Design Project.

¹² See Appendix A for a schematic of the curriculum.

It is important for me to affirm that I was steeped in “Ecovillage Design” from its incipient conceptualization, and that I learned the fundamentals from the nucleus group of pioneers. For these reasons I feel that any subsequent re-presentation or re-iteration I may make is, therefore, aligned with the source and so genuine, authentic, credible.

After 5 years of diligent and very satisfying work, I eventually completed my program at Fairhaven and graduated – but my inquiry still had not been completed for there were still a collection of subjects and particular fields of interest that I had included in my proto-curriculum that I ran out of time to attend to. From that perspective, graduating with my B.A. degree was a rather arbitrary event, the temporary plateau of an exploration still in-progress. And so I was elated to have been accepted into the Whole Systems Design (WSD) program at Antioch so that I could continue to deepen and enhance my study, taking it to a new level of refinement by augmenting and framing it within emerging, innovative, scientific languaging, as is the nature of Whole Systems thinking.

Whole Systems Design? Of course; that’s what I had been doing all along without a proper name for it. As I would come to realize, at its core Permaculture Design is a form of Whole Systems Design. Ecovillage Design is also inherently, inescapably a form of Whole Systems Design. Comprehending the underlying essence of these applied organic fields is greatly assisted by a thorough investigation of WSD principles and concepts. WSD is an emerging, trans-disciplinary, theoretically-based, quasi-scientific affirmation of organically intuitive cogitations, as much an expression of ‘Taoism’ as of ‘cybernetics;’ as much appropriately applied to ‘organizational dynamics’ as to ‘global dynamics;’ and as I have been attempting to portray convincingly with my studies, a meaningful tool for apprehending the essence of Ecovillage Design. WSD provides a rich repertoire of vivid languaging, expressive metaphor, and useful conceptual material to accentuate the visualization and discussion of this essentially organic field. As I entered the program, I was anxious and eager to learn all the subtle intricacies of this new mode of thought so that I could apply them to my ongoing exploration and integration.

I perceived my self-designed program at Antioch to be a logical, natural extension of the work-in-progress of the, then, previous six-and-a-half years, going back to that first Permaculture Design Course in 1993. I wrote up an “Action Plan,” as requested, in my first quarter that included lots of new WSD material but also remnants of investigations that I didn’t have time to attend to in my undergraduate degree. That Action Plan is now almost consummated and the completion of my Master’s degree is close at hand! I have the feeling, however, that the culmination of this degree is yet another arbitrary plateau in an exploration still in-progress. Is this not the nature of life-long learning in a field that can never be truly mastered? After all, a thorough investigation of “Ecovillage Design”

includes, potentially, just about everything! That's why it's so important to concentrate on fundamental principles first and foremost.

In the WSD program I began by establishing a firm epistemological base from where to perceive the world systemically. This included the comprehensive introductory "Immersion into Whole Systems Design," and then Independent Studies focusing on "Living Systems Theory" and "Cognition Theories." From there I proceeded to practice applying the new paradigm that was crystallizing in my mind to theoretical characterizations of the 'ideal ecovillage,' the ecovillage that is just waiting to manifest itself. I undertook Independent Studies whose final papers bear the titles "An Introduction to Ecovillage Economics" and "The Ecovillage as a Living Cell."¹³ Back in the classroom at Antioch I took some more systems-oriented classes: a "Visual Literacy Studio" and a class from Jonathan Scherch's Environment and Community program. From there I added the classes "Nature's Metaphors" and "A Transforming Learning Experience" (which was also about transforming-systemic teaching). I also completed a very interesting and confirming study called "Classic Egyptian Settlement Patterns," which was my second in-depth ekistic analysis (after a previous undergraduate study focusing on "Classic Maya Settlement Patterns"), and another study where I was able to research and think deeply about the energetics of sustainable settlements using the EMergy/Systems Ecology analysis of Howard T. Odum. Finally, now in process, I have been reading many "Utopias" for the past 6 months in preparation for writing my own little Utopian piece about life in an idealized ecovillage (what else would it be about?). That brings us up to the present, that stage in the M.A. degree process when it is time now to begin preparing for the presentation of a Graduate Design Project, a culmination and demonstration of all the learning that has come previously.

Now that the Historical Context has been outlined and described, please allow me to make some poignant illations: 1) Through fortunate timing, I was privileged to inaugurate my formal education in Ecovillage Design synchronistically with the emanation of the ecovillage vision as an internationally recognized 'movement' (solution).¹⁴ 2) Through extensive travel I was able to experience, participate in, and learn from the inceptive presentation of "Ecovillage Design" as an ordered, structured, educational configuration by the innovators in the field, at specific models-in-progress; 3) Highly influenced by

¹³ Graduate School is certainly an advantageous place to increase one's reading and writing proficiency. Soon my papers were averaging 40 pages and I was reading up to 100 pages a day. The qualified feedback to and critique of the writing by professional faculty positively accelerates the quality of the work.

¹⁴ I so dislike the feeling associated with the word 'movement.' Once an organized, grassroots proposition becomes a 'movement' it is open to media exploitation, stereotyping, marginalization, and a confusion of the original preliminary intentions; in short, it can then become devalued, co-opted, and compromised. It may prove necessary in the future to distinguish between "Ecovillage Design" (which may degrade into commercial uses) and pure "Village Design" (the products of which may not fully materialize until several generations hence).

these associations, I was able to produce a proto-curriculum for a B.A. degree and cumulative M.A. degree that are intimately aligned with the originating intentions of an emerging global permutation; 4) Through a rigorous WSD graduate program, I have been able to intensively deepen and expansively broaden my ideas and intuitions concerning the essence of Ecovillage Design through copious reading and writing, and to express these within holistic systems languaging; and, 5) By designing and implementing a final Graduate Design Project, I am being given the opportunity to proactively demonstrate all this accumulated learning in a real-life, organized educational situation, with the potential to make a real contribution to the field.

In consideration of these meaningful inferences, I propose that my unique, acquired niche from which to design and present a Graduate Design Project may in fact be the genealogically-informed, holistic-systemic organization of that ambitious, idealistic, almost pretentious title “Ecovillage Design” as an organized educational experience, or something to that effect. To achieve this, I am able to draw upon the wealth of my own experience synergized with the conceptual source from which the whole solution has emerged. This Graduate Design project at Antioch is, then, a formal opportunity for practicing, exercising, and demonstrating proficiency at a task that may conceivably become my life’s work.

The Graduate Design Project

This Context Paper began by portraying the greater context – the mythico-spiritual dimensions and larger life vision – within which the Graduate Design Project (GDP) is unfolding. Then came the historical context: a chronology of the most prominent educational experiences – beginning with a seed event and culminating now in a GDP – that form the particular ontogeny whose characteristics define my unique understanding of and approach to the subject of Ecovillage Design, and especially the organized educational presentation of the same.

I believe it is important to frame in this way any issue under consideration: by beginning with the larger, more-inclusive picture and then from there focusing in on ever greater topical detail. This is the way I engage in conversation, for example, by opening with a greater context – and that can arouse impatience in some people eager for a quick response; yet I believe it is important for every statement made to be made in context so as to provide a frame of reference and point of departure. That is the way to undertake my Design Project as well: by starting with the larger, more-inclusive picture and then moving inward to ever more refined detail. This strategy can be illustrated in the Permaculture Design maxim, “take a look at what’s happening over the fence,” or, be aware of how the particular design scale under consideration fits as a part into larger wholes. This whole attitude is the very essence of Whole Systems Design: it is a salient conceptual counter-point to the prevailing *reductionist* tendency in our overly mechanized society, reinforced by the dominating scientific paradigm, which somewhat self-referentially asserts that complex systems can best be understood by analyzing and investigating their parts in isolation, thus ignoring context and vital interrelationships. Ubiquitous reductionism is observable at all levels of thinking and practice in Western civilization; once internalized, it results in a disconnected, incoherent, somewhat arbitrary apperception of reality.

So, in keeping with the holistic nature of Whole Systems Design thinking, it is time to be more specific (but not yet too specific); it is time to think generically about the Graduate Design Project.

For completion of a Master’s degree, the Whole Systems Design program requires the designing, implementation, and final evaluation of a Graduate Design Project. The GDP takes the place of a thesis; or, the GDP could be considered an action-oriented, experientially-based thesis. How seemingly straightforward it would be to write up an

extensive, thoughtful, comprehensive paper encapsulating my accumulated learnings, including unique theories or propositions, and then follow that up with an outlook toward prospects for future learning or application. If that were the case, I would be close to completion of a degree by now. Instead, the unique challenge of the GDP is to arrange for the learning to be demonstrated by designing a Project that involves the collaborative participation of a specified simulated ‘client,’ with the input and evaluation of a consulting Degree Design Committee, including appropriate Field Advisors. This means that the GDP becomes a sort of Group Design Project and requires a good deal more work and initiative – communicating, co-ordinating, preparation and planning – than a standard thesis in an ordinary degree. If successful, this extra effort is post-justified by staking out a unique niche which could conceivably generate emergent possibilities for the graduating WSD student.

Additionally, the GDP does not occur in isolation: it is the central component of an “Innovation and Synthesis” phase that is the culmination of a sequence of phases that comprise the WSD degree process. By moving sequentially through these phases, the degree itself becomes an archetypal process of Whole Systems Design, marking the significant stages in the generic development of a comprehensive design. In WSD languaging, the “Innovation and Synthesis” stage is preceded by the “Design Development” phase, which in turn is preceded by the “Convergence” phase with its Convergence Question.¹⁵ The Design Development phase is filled with activities whose lessons are intended to lay the groundwork for the GDP, the final demonstration of learning, and includes an initial proto-project. The proto-project that I was able to arrange for my specific degree process centered around the design and presentation of an “Ecovillage Design” class at Fairhaven College.¹⁶ My intention was to assume the role of ‘meta-designer’ and design a design course.

There, although somewhat tedious, I thought it was important to outline all the procedural milestones of the degree process for those not familiar with them. Allow me now to recount the lessons integrated from the Design Development phase because they have a very real bearing on the direction and attitude of any subsequent GDP.

Coinciding with the posing of the original Convergence Question in the very early Spring of 2001, a fortuitous and fortunate opportunity presented itself at my alma mater – Fairhaven College, WWU – with which I still have a regular association. I had been preparing mentally for years to present an “Ecovillage Design” class to crystallize and reify all I had been learning, and a ‘convergence’ of factors indicated that the auspicious time

¹⁵ For completeness, the “Convergence” phase is preceded by the “Divergence” phase which in turn is preceded by the “Immersion” phase, where it all begins.

¹⁶ See Appendix B for course description.

had arrived. I wrote up a course description and submitted it to the College; it was accepted and listed in the Course Catalog. I was ecstatic! The timing was perfect. I proceeded to formally design, organize, and implement this Ecovillage Design class as the heart of the inquiry for my Design Development phase. I augmented the project by auditing a 400-level “Planning Studio” class at Huxley College, the world-renowned environmental school, and also by taking a class at Antioch that included “A Transforming Learning Experience.” It all fit together so nicely as one neat, interwoven package of learning. It was an exuberantly active Spring filled to the brim with marvelous, far-reaching, transforming educational experiences.

I understand the execution of this Design Development phase to have been the practice, experimentation, and self-instruction providing the necessary feedback for now, subsequently, conceiving and designing an improved GDP. It naturally follows, then, that my proposed GDP would be an extension, refinement, and elaboration upon the Ecovillage Design class presented last Spring. I personally see room for much improvement; yet, judging from the written evaluations of the 16 students who took the class, it was already an enormous success, with many students wishing the class to be continued, some suggesting that it would best be presented in a succession of three or four quarters in a row, or maybe even as a 12- to 15-credit block. The Dean himself expressed that “a class like this should be offered on an ongoing basis.” By my own account, I would agree, for a single 3-credit class was far too short to give adequate attention to all the material I wanted to convey – and we really did just get into the first few steps of the designing phase of our project.

All in all, the Ecovillage Design class that I had the opportunity to present was a tremendous learning and growing experience for me, and I think it best to enumerate the principal lessons:

- 1) I came to the realization that the class I taught was somewhat mistitled! Though “Ecovillage Design” is an agreeable name people can relate to, it does not accurately reflect the work in which we were engaged. From the theoretical side, the philosophies, concepts, and ideas I introduced were of a much more inclusive subject – that of “Sustainable Community Design” or maybe “Sustainable Settlement Design,” of which “Ecovillage Design” is just a particular subset.
- 2) From the practical side, we initiated organized, purposeful, comprehensive ecological design work on a 5-acre piece connected to the University in an effort to lay the groundwork for a proposed “Ecovillage Demonstration Site;” but that title also was a misnomer for the site is much too small to encompass a “village.” The intended objective of our ambitions would then have been more appropriately

entitled “*Ecohamlet* Demonstration Site,” but would students be attracted to a course called “*Ecohamlet* Design?”

- 3) I found it far too confusing to rush students (because of a ‘quarter’ time limitation) into the Group Design Process for setting up as complex an entity as a proposed Ecovillage Demonstration Site without first establishing a broad, secure epistemological base from where to begin the design. There were widely varying skill levels in the class, and some students were not yet ready to jump into actual design work because they lacked a firm conceptual basis, “What exactly is it we’re designing?” some would ask. So I was continually moving back and forth between introducing fundamental principles, showing examples of ecovillage models, and then pressing forward with the site design. It was certainly full yet at one point I entered ‘chaos,’ and that too was part of my accumulated learning in the Design Development phase, for, using WSD principles, I strategically encouraged and directed the chaos to propel the class to a higher level of order and commitment, and my interventions succeeded. Still, I would prefer not to have chaos emerge in an introductory course, so in the future I will concentrate on establishing fundamental principles first and foremost before moving on to actual design.
- 4) Ecovillage Design is a vast subject. A simple 3-credit course can hardly do it justice; at best it can serve as an introduction or overview. In retrospect, I concluded that I was attempting to pack material from four distinctly separate conceptual themes into this one course title. After some speculation, I have come to label these four themes as: 1) Sustainable Settlements: An Ekistic Approach, 2) Advanced Human Ecology: Ecological Design, 3) Growing Community, and of course 4) Ecovillage Design. Each of these four subjects could easily fill an entire 3-credit course on its own and still amount to basically an overview. Organized together as a coherent whole they comprise individual elements of a grander, over-arching subject, one I have come to envisage as *Fundamentals of Village Design*. This more-encompassing title, then, becomes the conceptual focus or thrust of the educational experience I designed and implemented in the Spring of 2001 as the central component of my Design Development phase, or, that is the principal lesson I learned.

These four were the main conceptual/organizational lessons but there were countless other more personal and process-oriented lessons as well. For example, I learned the subtle difference between ‘teaching’ and ‘facilitating;’ I discovered the paradox between giving the students a certain amount of autonomy and initiative while at the same time maintaining control; I learned that, even with the best-laid plans, the class will assume a life of its own; I learned that there is not much distinction between the roles of ‘teacher’

and 'learner' – indeed, we were all teaching and learning; I learned that, for each student to thrive in the learning experience, s/he must discover a personal identification with the material and must be allowed to actively explore and express that identification, which may prove tangential to the original intentions of the course design; also, many of the students attracted to a course title like “Ecovillage Design” are on a ‘spiritual path,’ or are contemplating one, and so much sensitivity must be employed; etc., etc.; this list could be quite long.

Throughout the presentation of the course, I kept and recorded conscientious and detailed documentation of the process as it was occurring. Each week, after each class, I wrote for myself a “Reflective Summary,” a personalized exposition of the important developments I perceived as the class progressed. This paper included much emotional-feeling material of reflections on my role as facilitator-teacher, including a lot of interactive, inter-relational, communicational themes – observations on what had transpired between me and individual students or between me and the class as a whole. Each week I also wrote and distributed a “Facilitator Feedback to Students” paper. This memo was designed to communicate to the students my perceptions on how the class was progressing, what we had achieved compared to what had been intended, and finally, providing for the students an idea of what to expect and prepare for in the following class based on what had occurred just previously. I received much positive feedback and encouragement for this format of staying in touch with the students. I thought this format was necessary to maintain a sense of continuity since the class periods were only one day a week, and also because the original syllabus I had drawn up soon fell by the wayside and the class assumed ‘self-organizing’ status. I also wrote a 5-page paper called “A Transforming Learning Experience” in which I attempted to frame the lessons of the presentation of this course within a global evolutionary context, focusing in the deep transforming effect it was having on me, and postulating a designed situational setting that could encourage more enhanced multi-dimensional comprehension.

These have been the significant lessons I learned during my Design Development phase that have real and lasting influence on any subsequent GDP for the Innovation and Synthesis stage. Since the GDP is designed to be an extension and refinement of the lessons learned during the Design Development phase, in turn arising from the posing of the Convergence Question, I propose that my individualized GDP be centered around the design and implementation of an organized, systemic educational presentation called *Fundamentals of Village Design*. The primary design considerations for such a presentation will be expounded upon at the conclusion of the paper. The specific milieu, the specific client, and the specific method of presentation are still open and unconfirmed and will be addressed in a forthcoming Degree Design Committee meeting.

I must mention now that since procuring the cooperation and participation of a client involves time and preparation, I have taken the liberty of already submitting to Fairhaven College as a potential client a follow-up proposal to the Ecovillage Design course presented Spring 2001. This proposal includes four separate course titles melded into a comprehensive 12- to 15-credit block called, convincingly, *Fundamentals of Village Design*. The four separate course titles are the previously mentioned “Sustainable Settlements: An Ekistic Approach,” “Advanced Human Ecology: Ecological Design,” “Growing Community,” and “Ecovillage Design.”¹⁷ I have received notification that my submission has been received and is on file, yet there is no guarantee that this proposal, all or in part, will eventually be accepted. For that matter, objectively speaking, there is no guarantee that I will *ever* procure a client to accommodate such an offering – or even that I will ever complete my degree at all! This is just the situation as it stands at the present moment, that stage in my theoretical meanderings that I have arrived at. Perhaps I could enlist the Mother Goddess Gaia as my client, and present my offerings to her directly? In any case, the specifics of the GDP are still open for manipulation.

It is also very important for me to mention that I am pursuing this course of action based most particularly on positive feedback from the students. I consider it quite pretentious and exceedingly unwise for an individual to self-reflectively present himself as a ‘teacher’ to fulfill their own desires. In an organic setting, a teacher is a person who attracts students, who is chosen by the students. In an institutionalized setting, a teacher is a person credentialed to fit a job description. Based on the positive feedback I received from the students I presented to (and even others who were not directly part of the experience) I have been encouraged to make another attempt at ‘teaching’ a course.

Perhaps, in preparation for the upcoming meeting, it would be useful to my Degree Design Committee for me to clarify just what I mean by the inclusion of “Ecovillage Design” as simply a component of the more-encompassing title “Fundamentals of Village Design.” After all, up to this point I’ve been speaking about Ecovillage Design as if it were the all-to-end-all, calling it the “supreme solution.” Indeed, with unbounded enthusiasm I have made this title the focus of my formalized educational exploration for the past seven-and-a-half years. In that time, however, I have come to recognize a sort of irony or paradox that will be explained in the following section.

¹⁷ See Appendices C – F for course descriptions.

Fundamentals of Village Design

“What exactly is it we’re designing?” That is a fair and pertinent question. Having made the title “Ecovillage Design” the focus of my formalized educational exploration for some seven-and-a-half years now, I have given much critical thought to the answer. I have developed a somewhat Utopian (literally, nowhere) image of the ‘ideal ecovillage’ and have discovered that what I have in mind contrasts markedly with the common usage of the term. By the standards I have been applying, there does not yet exist anywhere on Earth a human-scale, full-featured settlement, in which human activities are harmlessly integrated into the natural world, in a way that is supportive of healthy human development, and (this is the clincher) can be continued into the indefinite future. There are, for sure, bits and pieces scattered about the globe, in a wide variety of proto-models, some quite impressive, but it hasn’t all come together yet in one space-time event. This makes the ‘ideal ecovillage’ still latent potential, just waiting to manifest itself.

By my own account, the word ‘ecovillage’ gets used rather loosely; it seems to arouse in people an affirmative, agreeable, even emotional response – “Yes! That is what we want” – with a preconceived notion of what it means without much prior deliberation. For example, most of the people I talk with assume that it is an idyllic hideaway in the countryside, with the expressed purpose of sheltering itself from the problems of the world. A student at a recent slide-show I gave believed beforehand that an ecovillage was a “hippie commune.” A banker I spoke with concurred: “I’m from the other school” he asserted, insinuating, I presume, that an ecovillage must be ‘communist’ vs. ‘capitalist.’ (!) This widespread “back to the land” associated imagery is not entirely accurate, for the ecovillage is being conceived as a solution and so most proto-models promote energetic interactive and cooperative relationships with their surroundings, including, of necessity, city, county, and shire governments. GEN, as the center, is developing conscientious relationships with transnational entities, including the United Nations.

Checking the Web, we can find many well-intentioned proposed ecovillages. For example, two or three families will come together and advertise: “We are starting up our own ecovillage,” when in reality their purpose is to establish another “intentional community.” All ecovillages are intentional communities but not all intentional communities are ecovillages, yet the two terms frequently get used interchangeably. The Ecovillage Network of the Americas (ENA) now boasts some 60 so-called ecovillages in the U.S. alone, of various shapes and sizes, forms and functions, including some located in urban scenarios. None of their descriptions or current manifestations, however, fulfill

the inchoate criteria first put forward by *In Context* – most notably, none of them “can be continued into the indefinite future” – so they are not sustainable.¹⁸

That’s why I’m saying the word ‘ecovillage’ gets used rather loosely; it’s being indiscriminately applied as a blanket term to a wide variety of settlement patterns with a wide variety of forms and functions. These various settlement types could be labeled: “cohousing developments,” “shared group housing,” “retrofitted urban blocks,” “land trusts,” “multi-dwelling farms,” “villas,” “aldeas,” “homesteads,” “healing and/or conference centers,” educational demonstration sites,” “spiritual communities,” “retreats,” even plain old “intentional communities” etc.¹⁹ As a student of Ekistics – *the scientific multi-disciplinary study of human settlements* – I want to enter this discussion with a clear understanding of principal terms, including a categorical taxonomy of settlement types. I believe there is a kernel of identification with something grander in this word ‘ecovillage’ that people intuitively align with, and that is the heart of the matter, which I will now attempt to demonstrate.

“What exactly is it about an ecovillage that makes it a *village*?” That is a question I posed at my first Village Design course in Australia. Max Lindegger, having grown up in Switzerland, gave an informed and amusing reply that revealed the underlying issue to which I was alluding: in essence, “A village is large enough to contain a church; the smaller settlements are hamlets and have no church.” Yes, I think my concern comes down to the inclusion of this word ‘village:’ is it going to be used consciously or subconsciously? There is a certain nostalgic sentimentality that is aroused by its utterance, a certain familiar remembered feeling of connection and purpose that we, especially in the USA, have long lost. This, I believe, is why people respond so favorably to the sound of ‘ecovillage:’ I think they intuitively realize it is the direction to move to recover what has been lost.

The word ‘village’ on its own is certainly used loosely as well. That same nostalgic sentimentality is being aroused in many cases for the simplistic purpose of aiding commercial success. For example, here in my home town of Bellingham we have many so-called villages. They seem to be packages in two major types: some are simply “shopping centers,” as in “Sehome Village” or “Barkley Village,” and others are merely “apartment complexes,” as in “Viking Village” or “Varsity Village.” None of these examples are even a remote semblance of an actual “village” but the word feels good and attracts customers.

¹⁸ This is a highly debatable issue and I welcome open discussion. In a recent dialogue with a ‘cohousing’ developer in Tucson I asserted, “cohousing is not sustainable” and he retorted, “yes it is.” I think it all comes down to a definition and understanding of terms, and that is what I am attempting to clarify in this section. Like ‘love’ or ‘happiness,’ ‘ecovillage’ and ‘sustainability’ can mean different things to different people. Our latent potential and opportunity for collaborative inquiry in this endeavor can only be enhanced by a pellucid characterization of terms; otherwise the momentum will proceed capriciously, haphazardly.

¹⁹ Findhorn in Scotland, one of Earth’s premier ecovillage models, insists they began “unintentionally.”

There are also many business names around here bearing the same homey title: “Village Books,” “Village Lighting,” “Village Inn,” “Village Pub,” and the newly opened “Village School.” It seems that everyone wants to be part of the village without thinking about what it really means.

On a recent trip to San Diego, I discovered the standardized California version of the village: the planned “subdivision.” In a newly developed section of the area spreading unsustainably way out into the desert, I saw many so-called villages: “Village Estates,” “The Villages,” “Scripps Ranch Village,” “Palomar Village,” and a couple of shopping center villages. On a single stretch of road in another section of the area, the villages weren’t even named: the generic modular subdivisions simply appeared in succession as “Village I” through “Village VI”! If I had stayed longer I’m sure I would have seen many more of these phony villages. I know the former first-lady reminded us that *It Takes a Village* (Clinton, 1997) but I’m not sure this is what she had in mind.

This is my point: there is something deeply meaningful about association with this word ‘village.’ All of us, no matter our heritage, have ancestors who grew up and lived out their days in *real* villages. In these villages there was a sublime sense of connection to place, to family, to community, to Nature – we could say these people had roots! There was also a sense of belonging, of purpose, of trust and confidence, of security and certainty in the world. At the core, there was an intimate *identification with something greater*, something primordial and timeless, something spanning countless generations, something very sustainable. There probably was a reassuring predictability that would have seemed boring to us, accustomed as we’ve become to sensory overload, but at least the people knew that when they were to die someone close would be around to bury them.

These traditional villages were the preeminent sustainable communities – above all, “they endured.”²⁰ Many writers have traced the ephemeral nature, the rise and inevitable fall of ‘civilizations’ – that is, *city*-based cultures²¹ – but contrarily, there are *village*-based cultures that have sustained themselves more-or-less intact for some 8000 years or more – what could be more sustainable? If left undisturbed, these cultures would probably continue to sustain themselves indefinitely (or until the Sun grows so large and hot that it can no longer support biological, carbon-based life on Earth). Sadly, due to colonization, exploitation, assimilation, consumerization, internal growth, and/or

²⁰ This quote was the conclusion reached by Richard Critchfield in his 1983 book *Villages*, a cultural anthropological study taken of numerous villages over a 10-year span. Critchfield draws many more conclusions about village culture that can be used as design criteria by aspiring Village Designers.

²¹ For example: Andrew Bard Schmoekler in *The Parable of the Tribes: The Problem of Power in Social Evolution* (1984); Edward Hyams in *Soil and Civilization* (1976); Vernon Gill Carter and Tom Dale in *Topsoil and Civilization* (1974); Wm. H. Kotke in *The Final Empire: The Collapse of Civilization: The Seed of the Future* (1993); and the learned historian Arnold Toynbee in many of his writings, including *Civilization n Trial* (1948).

outright decimation, there may not be any more genuine traditional villages left in the world. But in those places where remnants of traditional village-based culture still remain somewhat unimpaired, there can be found the perennial qualities and characteristics to emulate in our quest for true sustainability – and, as Village Designers, to contemplate as fundamental design criteria.

Thus, then, is why I have come to prefer the more precise, more encompassing title “Fundamentals of Village Design” to describe my learning summations and acquired conceptual focus. *We will not realize true sustainability until we learn how to design, (re)create, and bring forth genuine, authentic villages*, with all that implies, and so we must begin with the fundamentals; that is the basis of my thesis. ‘Ecovillage,’ as it has come to be commonly used, does not quite reflect accurately anymore the comprehensive picture I have in mind, and so in the interim I’ve resolved to use the somewhat ambiguous title ‘ideal ecovillage’ as remuneration. But now, this authentic village thesis brings up a whole new dimension of design considerations (uniquely applicable to a WSD perspective), for the truly sustainable village cannot simply be *created*, outright, as one would purposely plan and build an entire subdivision for example, but instead must be skillfully designed to *create itself*. And what exactly does *that* mean?

There is an important sub-theme of Whole Systems Design called “Living Systems Theory.” There has been a fairly recent profusion of intriguing writing – especially in the biological, systems, and cognitive sciences – defining, interpreting, and expounding upon this emergent living philosophy, while presenting rich new conceptual material that can be metaphorically applied to a diversity of other disciplines, including the “Fundamentals of Village Design.”²² In *The Web of Life*, Capra provides a succinct definition: All living systems are characterized by three essential qualities: 1) a **pattern** of ‘*autopoiesis*,’ or self-organization; 2) a **process** of ‘*cognition*,’ or maintaining self-organization by exchanging information with a dynamically changing environment to keep continually abreast of any needed corresponding internal changes; and 3) the **structure** of a ‘*dissipative structure*,’ or an autonomous unity operating at highly energized conditions far from equilibrium, maintaining its structure by ingesting and metabolizing highly ordered materials from

²² For a sampling of this genre of authorship: *The Web of Life: A New Scientific Understanding of Living Systems* (1996) by Fritjof Capra; *Steps to an Ecology of Mind* (1972) by Gregory Bateson; *Autopoiesis and Cognition: The Realization of the Living* (1980) by Humberto Maturana and Francisco Varela; *The Tree of Knowledge: The Biological Roots of Human Understanding* (1987) by Maturana and Varela; *The Logic of Living Systems* (1970) by Francois Jacob; *Living Systems* (1978) by James Miller; *Design for Evolution* (1975) by Erich Jantsch; *The Self-Organizing Universe* (1980) also by Jantsch; *Gaia: The Human Journey from Chaos to Cosmos* (1989) by Elisabet Sahtouris; *Gaia: A Way of Knowing* (1987) edited by William Irwin Thompson; *Gaia: A New Look at Life on Earth* (1979) by James Lovelock; *The Embodied Mind* (1991) by Francisco Varela, Evan Thompson, and Eleanor Rosch; *Autopoiesis, Dissipative Structures, and Spontaneous Social Orders* (1980) edited by Milan Zeleny; *General Systems Theory* (1969) by Ludwig von Bertalanffy; and *Order Out of Chaos: Man’s New Dialogue with Nature* (1984) by Ilya Prigogine and Isabelle Stengers. These are just the books I have read or have been exposed to on the theme, all fascinating – there are many more still left to read.

the environment and then dispelling entropic waste products. That is the scientific definition.

Perhaps it is apparent how these criteria can be applied to a sustainable Village Design? Recalling the precursory Permaculture maxim, “in order to be sustainable, human systems must be modeled upon natural systems,” we can now elaborate by postulating, “in order to be sustainable, human settlements (or human habitation systems) must be modeled upon natural *living systems*.”²³ Since all living systems – from cells to organisms to ecosystems – are foremost *self-organizing* and *self-creating*, or *autopoietic wholes*, then we must instill in a truly sustainable Village Design this very same feature.²⁴ In other words, in order for our settlements to have the chance to be continued into the indefinite future we must design them to be genuine autopoietic *living systems* (created from within) as opposed to contrived allopoietic *mechanical systems* (created from without). Traditional villages were certainly living systems in all regards: they biologically grew into their mature forms all by themselves, without an external authority, over the course of millennia as anthropological outgrowths of particular ecosystems. That’s why they endured: they were the manifestations of cooperative, symbiotic co-evolution with the larger living systems in which they were embedded.

Going back to the thesis then, and renewing the intention to design authentic villages (ideal ecovillages) because village-based culture has proven itself to be so sustainable in the long term, then it becomes apparent that the real task of a Village Designer is to *purposefully define, delineate, and introduce the fundamental substratum of patterns, processes, and structures so that the village is capable of creating itself*, as a genuine living system. This makes the challenge primarily process-oriented rather than goal-oriented; the village is ‘grown’ rather than ‘built.’ This suggests that to come in as a professional design team, an external authority, and draw up the comprehensive and detailed plans and schematics necessary to construct a proto-village of, say, 5000, no matter how beautifully and intelligently orchestrated, will be, in effect, the creation of another *mechanical system* – not a *living system*. In the long run, it will have trouble being sustainable because it will not have been self-created, organically, by the people who will be living there – and perhaps more cogently, because it will not have had the chance to *grow* into its mature form all by itself. This is perhaps a sensitive point.

²³ I explored this postulate in a paper I wrote entitled, “Ecovillages as Living Systems: Reviewing and Renewing Organic Settlement Patterning” (2000). I then took it a step further in a paper entitled “The Ecovillage as a Living Cell” (2001).

²⁴ Besides being self-organizing and self-creating, Von Bertalanffy (1969) assures us living systems are also *self-maintaining*, *self-repairing*, and *self-differentiating*, “moving inexorably towards a time-independent state of equifinality.” Maturana and Varela (1987) add that living systems are *self-referencing*, meaning supposedly “informationally closed.”

A *living system* is primordially, indispensably *self-organizing* and grows through time as an autonomous unity with a history of structural coupling to an environment that is also evolving (Maturana and Varela, 1980, 1987). A design team, no matter how brilliant, cannot anticipate all the necessary contingencies to ensure mutually-reciprocating, long-term viable relationships between a settlement design and its dynamically changing, circumambient ecosystem; and still less anticipate the necessary interdependent relationships between the functions of the people who will be living and working in the settlement design. For these reasons, it is far more “timeless” to teach the people how to build (or grow) the village themselves.²⁵

All of the above is an initial outline of what I am suggesting by a “Fundamentals of Village Design.” It certainly does enter a whole new dimension of design considerations because implementation could conceivably be *multi-generational*, spanning decades or more. *The challenge is to create a living system that can assume a life of its own.* While seemingly impractical or quixotic when viewed from a standard vocational perspective, I believe these ideas rest on solid theoretical underpinnings. These ideas also place the current “ecovillage” momentum in a new light, for, while none of the current proto-models may be able to be “continued into the indefinite future” in their present configurations, they are, nonetheless, valuable and necessary experiments in fractalized form of what eventually must come to pass. Revisiting “Ecovillage Design” then as a component of the more encompassing “Fundamentals of Village Design,” and understanding that the current manifestation of the ecovillage is an interim solution, what are the design considerations for actualizing an ideal ecovillage, or, what characteristics would this ideal ecovillage embody? To answer that, I think it is best to go back to the roots, to the germinal definition, and examine the five points in course:

Human Scale: From a Human Geography perspective, a ‘village’ is larger than a ‘hamlet’ but smaller than a ‘town.’ Actual capacity depends less on population than on function (Hudson, 1970) but size never exceeds ‘human scale,’ by definition. A village is large enough so that all the necessary, elemental material and cultural accoutrements of a high-quality life can be comfortably provided for *entirely within the settlement*, if need be, by way of a complex economy – meaning a coordinated specialization of tasks. This makes the village self-contained and self-reliant, though I would not go so far as to say self-sufficient. At hamlet scale there are not enough people to form a complex, specialized economy, so an inordinate amount of attention and effort must be devoted toward

²⁵ This image comes from *A Timeless Way of Building* (1979) by Christopher Alexander, an enchanting discourse that amounts to a Taoist perception of self-organization as perceived by an architect-designer. This book is a prelude to the famous *A Pattern Language*, an essential handbook for the Village Designer.

fulfilling basic needs with little time left for superfluous cultural refinements or recreational pursuits; thus there is a diminution of creative living potential at both individual and social scales. (A hamlet is too small to contain a church!) Usually a hamlet supplies a natural resource need for a village, which recompenses with an exchange of finished manufactured goods. At homestead scale, without a supporting external economic structure, the people are reduced to subsistence living and perpetual drudgery. How could any settlement at these latter two scales – hamlet and homestead – be considered sustainable when it relies for its prosperity on the products, goods, and services supplied from an external source? If the source dries up or the supply lines are disrupted then the dependent settlement will be destabilized, perhaps irrecoverably.

At this time it would be propitious to add a further qualifier to the definition of ‘sustainable settlement,’ especially for the 21st century: a sustainable settlement is one that could continue to maintain its essential identity, integrity, and existence should the supporting and subsidizing global, corporate-industrial, fossil-fueled economic system collapse, unravel, or dissolve. Such an occurrence would completely devastate the composure of a “cohousing development,” for example, dependent as it is on the mainstream without an internal economy of its own. Such an occurrence would also thrust most of the “intentional communities” listed as “ecovillages” in the Global Ecovillage Network into serious disarray, even though they are proposing to be sustainable models. Even the ecovillages that *are* approaching village scale would be hard pressed since none is self-reliant, especially in food and energy production – though these larger settlements would fare better than the rest because a cooperative, coordinated, specialized economy of tasks could be mobilized and instituted to restore a sense of stability and self-maintenance. Still, a lot of people would go hungry. A genuine traditional village would hardly notice an event like a global economic meltdown.

Although the alarm has been ringing since the late 1960s, such a contingency is still a very real possibility, maybe even an eventuality. Indeed, a reading of such intelligently composed books such as *Beyond the Limits: Confronting Global Collapse: Envisioning a Sustainable Future*²⁶ and *Overshoot: The Ecological Basis for Revolutionary Change*²⁷ would lead one to expect such a global collapse as inevitable; by these accounts it is already well in motion. Systems ecologist Howard T. Odum has been imploring us for years to begin “preparing for a prosperous way down.”²⁸ In this light, the ecovillage becomes experimentation with proto-models of human settlement that could have the potential to withstand and weather this kind of radical change intact and subsequently

²⁶ (1992) by Donella H. and Dennis L. Meadows, and Jorgen Randers. This book is a follow-up to the enormously impactful 1972 book *The Limits to Growth*, a report for the Club of Rome.

²⁷ (1982) by William R. Catton, Jr.

²⁸ (1996) *EMergy and Environmental Decision Making*, and elsewhere, including *Environment, Power and Society* (1971) and *Energy Basis for Man and Nature* (1976).

emerge into the post-collapse world as the quintessential settlement pattern for a sustainable social order – yet we still have a lot of work to do to get these proto-models up to the optimum village scale, to make them – in the language of this paper – ‘ideal ecovillages.’

Along with a self-reliant economy of scale, a real village also has the characteristic that everyone living within can be known or at least recognized – strangers become instantly obvious. This creates a sense of social organic unity and collective solidarity, and facilitates a mood of safety and trust. The children can play openly in the streets and the doors don’t need locks; neither is a police force needed. A ‘town’ is a settlement that has grown so large that not everyone can be known or recognized, so it moves beyond human scale. In a town, the sense of organic social unity begins to fade as people with real mutual interests lose face-to-face, personable human contact. As compensation, abstract autocratic laws are introduced replacing natural or traditional laws to mediate disputes and temper avarice and supposedly guide the body collective.²⁹ At this scale, factions inevitably develop over the management and distribution of ever-dwindling resources. The resources are dwindling because a town, by definition, has grown so large as to exceed the carrying capacity of its local supporting ecological systems. This, then, begins the ‘tipping point’ leading to ever-consuming unsustainability; it is primarily and preeminently an issue of *scale*.

In summary, a hamlet is too small to realize the benefits and embellishments of the emergent possibilities associated with complex social potential, which, in its collective organization, produces ample creative free time for the pursuit of refined culture and re-creation. A town, in contrast, becomes too impersonal and too large to maintain social cohesion and ecological viability. Village scale is that magic size in between where the best of both worlds can be achieved in optimum balance – a high-quality life including advanced cultural attainments *plus* long-term ecological viability. As such, I propose the envisioned ‘ideal ecovillage’ (for lack of a better term) to be the operational ‘unit’ of sustainable settlement patterning in a theoretical Ekistics for the 21st century.

Actual population in a village can range from 500 to 5000 persons, depending on function and local carrying capacity.³⁰ From 50-500 is hamlet scale and above 5000 enters the ever-

²⁹ The laws are ineluctably designed to ensure that those who would claim or wield arbitrary power will be able to continue to do so and to increase their influence and holdings.

³⁰ This actual number issue is discussed and referenced in some detail in Kirkpatrick Sale’s 1980 book appropriately titled *Human Scale*. The number 5000 appears and reappears as an optimum size, for various reasons, though Sale prefers to call this a “neighborhood” scale. Mollison (1988) uses the number 500 as a basic social unit, which then can be aggregated into larger wholes. It is my own choice to use 500 as a minimum and 5000 as a maximum for an ‘ideal ecovillage’ because these numbers can be easily worked with in a theoretical Ekistics: a ‘tribe’ size full village

increasingly unsustainable domain of town scale and beyond. City scale, and more monstrously, metropolis or megalopolis scale, with populations into the tens of millions, are complete aberrations in this kind of analysis, entirely divorced from any grounding in a human scale, and so are utterly unsustainable. I know this conclusion will be unpopular with some, especially those working on “eco-city” visions, and I take full responsibility for it as my own. I detailed my perceptions supporting this conclusion from many different angles in a paper I wrote entitled, “Sustainable Cities: An Oxymoron?” (2000). The only possible way to begin moving city-scale settlements toward sustainability is to radically decentralize and retro-organize them into distinct, village-scale sub-units, organically, like cells in a tissue or organs in a body, with well-defined centers and well-defined boundaries. The ‘city’ pattern, as it exists, with a densely nucleated urban core that spreads outward in all directions, is a direct reflection of highly centralized, unaccountable, arbitrary power structures that can only lead to oppression, imperialism, and perpetual warfare. This is no exaggeration: it has been the case ever since the first real cities materialized in Mesopotamia, circa 3000 B.C.

Full-featured: This point distinguishes the ‘ecovillage’ from the ‘traditional village.’ The ecovillage is not intended to be a reversion to a primitive, austere, Spartan level of existence, as is often assumed. Rather, the vision is more of a reversion-*succession* – a conscious synthesization of all the ethically redeemable and life-enhancing amenities of 21st century life with the organic social cohesion and ecological viability of traditional village life. “Full-featured” incorporates widely yet discriminately employed appropriate technologies, a cornucopia of enlivening arts and sciences, full access to educational and re-creational resources, comfort and convenience in moderate proportion, and abundance and prosperity in those qualities most contributory to an extended, productive, healthful human life. All of this could be achieved by thoughtful design if the intention was there! Full-featured also means enough of a diversity of interests and talents, enough of a skilled and educated populace, so that the ideal ecovillage has the capacity to grow and maintain, internally, a lively, vibrant, unique and vernacular sub-culture of its own.

Human Activities are Harmlessly Integrated into the Natural World: This is the ‘eco’ part of eco-village. The all too convincing premise is that, in order to be sustainable, a human settlement must be harmoniously, organismically blended *into* its circumambient local

body of 5000 would be subdivided into ‘clan’ size groups of 500. These clan-size groups would then be further subdivided into extended families of 50 or so. This is exactly how the Classic Maya organized their settlements, with each social grouping responsible for an essential economic function to contribute to its larger whole, as described in *Classic Maya Settlement Patterns* (1981) edited by Wendy Ashmore.

ecology, as a living system within a living system. Contrarily, an unsustainable settlement imposes an abstract order *over* its local ecology, in many cases completely burying it, as under an arbitrary abstract square grid. The ideal ecovillage, then, could be considered a *constructed ecosystem for human habitation*, a constructed ecosystem ecologically embedded within a larger natural ecosystem. This means, for example, that during ongoing site design, attention must be given to maintaining, utilizing, and even enhancing the existing energy flows of the specific location – including wind, water, sun, ‘chi,’ and information flows. It also means the conscientious, mutually-beneficial and mutually-productive stewardship of indigenous biological resources, including flora and fauna. It means, generally, that the ideal ecovillage has the potential and ultimately the responsibility to *consciously assist* the salubrious long-term evolution of the local environment in which it is embedded and from which it draws its sustenance, as a *cooperative partner in co-evolution*.

Supportive of Healthy Human Development: This statement recall the images of the “vibrantly fertile womb” or the “incubation chamber” in which the unrealized, untapped potential of humanity may be brought to life and nurtured – yet it doesn’t necessarily need to be spiritually motivated either. Healthy human development can be simply the natural co-product of healthy human relationships, relationships based on truth, justice, fairness, equability, mutual-respect and mutual beneficence – relationships based on traditions arising to promote and ensure the long-term viability of the Whole. And once the health of the Whole is attended to, it naturally follows that the health of each individual part is also promoted, including individual humans. The absolutely most effective way to ensure healthy human development is to concentrate first on childhood, giving the children a safe, caring, supportive start in life, with full opportunity to blossom into their own unique personhoods. Healthy human development, like community, is an outcome that cannot be purposefully designed for but rather arises naturally as a consequence of good, thoughtful design. Whole Systems Designers focus first on providing the context within which the desired result may manifest *itself*,

Continued into the Indefinite Future: ...is a concise and by now familiar definition of ‘sustainability’ and is the supreme goal of the ecovillage momentum, as I interpret it.³¹ That is why I wrote previously that the ideal ecovillage is the ultimate solution to the so-called sustainability crisis. There would be no crisis at all if the five points listed here were

³¹ In the interest of equability, another widely used though more materialistically definition of sustainability states: A sustainable situation is one where the current rate of use of nonrenewable resources does not diminish the opportunity of future generations to have access to these same resources. By these standards, the current global economic system is perniciously unsustainable. How long will it take to collapse?

used as priority design criteria for the establishment of human settlements. That is the proposition, the potential, the latent promise of the emerging ecovillage vision; it is just waiting to manifest itself, to unfold like a marvelous, intricate, many-petaled flower. There are so many beautiful, talented, well-meaning people all around the globe working so hard from so many manifold and convergent directions to bring this vision to fruition. No matter what terms are used, I believe the intent is the same: taking responsibility for pro-actively bringing forth the kind of world we would *choose* to live in, by desire, by *design*, instead of passively accepting the too often dysfunctional world that has been hand down to us. It will take much time but the vision will eventually appear, *must* appear, for as Buckminster Fuller entreated, it is either “Utopia or Oblivion” (1969).

Now that I’ve taken the opportunity of explicating my own particular vision of the *ideal ecovillage* and how this vision fits into a greater settlement design context for the 21st century, it is time to check in with the authoritative source, the very competent, capable people who are managing the emergence of this global permutation: the Global Ecovillage Network. What does GEN have to say about the ecovillage? Checking the website at www.gaia.org we find that ecovillages are:

“...urban or rural communities of people, who strive to integrate a supportive social environment with a low-impact way of life. To achieve this, they integrate various aspects of ecological design, permaculture, ecological building, green production, alternative energy, community building practices, and much more.

Ecovillages typically build on various combinations of three dimensions:

- Social
- Ecological
- Cultural/Spiritual

This definition illustrated the current situation objectively, laconically, and impartially: it is designed to introduce the ecovillage concept to a wide general Internet audience, some of whom may be beholding it for the first time. It neither references philosophical underpinnings nor proposes future possibilities; it simply describes matter-of-factly the meaning of ‘ecovillage’ as it is currently commonly employed. My interpretation of this definition tells me that ecovillages are apparently the testing ground for the experimentation and integration of sustainable living in community with alternative technologies and innovative design techniques – and what a beautiful image that is! Yet by themselves these proto-models are not going to ensure sustainability; they are merely progressive influential steps in the right direction. What about scale? What is it about an ecovillage that makes it a village?

Having approached this topic from a detailed and rigorous, admittedly theoretical, academic exploration, I want to keep stretching the boundaries, pushing forward to the beckoning potential, projecting out an image as an attractor of just what I believe must eventually come to pass and the postulating the steps to get there. How much longer will it take to see the ‘ideal ecovillage,’ the synthesization of all the above qualities and dimensions in one, comprehensive, village scale, space-time event?

The greater ecovillage vision is the solution to the so-called sustainability crisis; it is full of rich, fecund possibilities just waiting for the ripe time to manifest themselves. Ecovillage Design is the conscious, premeditated, creative exploration of these possibilities – timely, innovative experiments of various shapes and sizes, forms and functions, purposes and intentions, of varying levels of complexity and sophistication, whose totality constitute the vanguard of an emerging planetary revolution. When viewed individually, these proto-models comprise fractalized conceptual parts that one day will be integrated together into a larger, more inclusive, holistic-systemic whole. Ecovillage Design, at its best, is the bold effort of imagining, suggesting, and in time bringing forth *ideal living situation*, idealized human settlements that can provide the living context within which to actualize our deepest aspirations, the unrealized, untapped potential of humanity. Fundamentals of Village Design is the comprehensive theoretical educational preparation for this task.

Taking this all a step further, and aligning the task with mythico-spiritual concerns in a more cosmic context, a Village Designer for the 21st century has the potential to be a willful, mindful participant in co-evolution with the Mother Goddess Gaia, the living essence of planet Earth. Each new project that comes along, at whatever scale, is an opportunity to assist and serve Gaia as she approaches a new threshold of self-awareness and self-realization.³² The strategy is to first cultivate a fertile, receptive context and the deliberately, consciously seed this context with potent, virile seed-ideas that may sprout and grow and one day bear seeds of their own, thus creating a self-perpetuating, self-renewing cycle that can span generations. The actual context for this work could be an ordinary conversation, an educational slide-show, a shared group household, the presentation of a college course, the formation of a permaculture demonstration site, a

³² This image is entrancingly illustrated in a series of books I was introduced to in Ireland written by Ceanne DeRohan, including *Right Use of Will* (1985), *Original Cause: The Unseen Role of Denial* (1986), *Original Cause: The Reflection Lost Will Has to Give* (1987), etc. In this series, the Earth Mother is seen as essentially having compromised and lost her Will because of misunderstandings generated in primordial relationships with the Universal Father and other cosmic entities. Lost Will has corresponded with the inability of the Earth Mother to protect herself against ravaging, plundering beings who desire to take advantage of her weaknesses and exploit her beauty and composure for their own gains. Fortunately, the series ends as the Earth Mother recovers her lost Will, casts off those parasitic beings who would emaciate her, and restores her original immaculate beauty and empyrean splendor – the return of a magical Golden Age on Earth.

GDP at Antioch, or an actual Ecovillage Design project – the organic strategy is still the same. A competent Village Designer must first be an accomplished gardener; it's all a difference of scale.

When conducting this type of seeding operation, it is very important not to become overly identified with or attached to the final form of the outcome; *process is paramount*. The intent is to energetically inseminate an organic unity, a living system that can assume a life of its own, and, as a semi-autonomous being, self-navigate its own unique course of hereditary development. If the time and conditions are auspicious, and the seed-ideas viable, then something prolific will begin to grow and take form of its own accord. This does not mean there is absolutely nothing to do; it just recognized the fact that what can be accomplished operating solely from a controlling, temporal ego-center is limited and often counter-productive to the needs of the project as a whole. There is a time to advance and a time to withdraw. There are natural cycles to align with. There is a life-force already in motion which needs to be attuned to. This strategy could be considered the “art of manifestation;”³³ it stands as the receptive counter-pole to the predominant, assertive, linearly goal-oriented and usually (in our culture) unilaterally administered “consciously planned creation.”

Gaia wants it to happen so there is no need to forcefully press the issue, hurriedly expecting immediate operational results. As Village Designers we have a very powerful, omniscient client – she has many ways of revealing her needs and desires. In our design considerations, we would do well to assume a more patient, receptive posture. By attentively, mindfully observing and listening, we will come to know in our deepest heart of hearts THAT which is attempting to come into being. As human designers we will always be less than fully prepared to completely comprehend the manifold dimensions of the actualization of this cosmically influenced, global evolutionary phenomena. We may as well go with the flow, enjoy the ride, smell the flowers and celebrate as often and as passionately as we can our privileged involvement with this birth of a new Humanity on a new Earth. With an attitude like that we will be balanced and grounded enough to begin equanimously commencing our work, for there is a tremendous amount of work to be done!

³³ As conceived by David Spangler in his 1996 book *Everyday Miracles: The Inner Art of Manifestation*.

Design Criteria

WE have finally arrived at the stipulated purpose and conceptual heart of this Context Paper – outlining the design criteria that will influence and inform a proposed Graduate Design Project in the Whole Systems Design Individualized Master’s Degree program at Antioch University Seattle. This section is the culmination of all that has been exhibited up till now. Each of the previous sections was designed to provide substantive justification for the choices made here, gradually and sequentially guiding the reader to the position of being able to accept these criteria as the logical and reasonable consummation of this story as it has unfolded.

The design criteria define the standard upon which the GDP will be evaluated and prescribe the essence of what I want to bring forth. Without establishing initial criteria, there is no way to judge whether an implemented design has actually produced or contributed to the desired results. *Whole Systems Design*, from one perspective, is a proactive exercise in consciously, skillfully creating a fertile context in which desired results can *manifest themselves*. Likewise, Village Designers are like midwives – gently attending to and overseeing the details of the birth of a living form that already wants to come into being of its own accord. City Planners, in contrast, are more like technicians or engineers, manipulating the interchangeable parts and specifications of a well-oiled machine so that it continues to operate without breakdown.

Since I have already affirmed that I consider my education to be synonymous with my life’s work, I wish this GDP to be an educational experience in which I can practice actualizing this same life’s work. Since I have already exclaimed that my deepest aspirations are to positively, constructively contribute to the spiritual regeneration of humanity and the healing of the Mother Goddess Gaia, I wish to have my life’s work attest to these deepest aspirations. Since I have already articulated a vision of the ideal ecovillage as the logical context from which this new humanity and healed Earth will be birthed, I wish this GDP to be centered upon an Ecovillage Design that can assist this emergence. Since I have already asserted that any new Ecovillage Design project must, of necessity, be also a shared learning experience, I wish this GDP to be an expression of, more specifically, Ecovillage Design *education*. Since I have explained my reasons for incorporating the title “Ecovillage Design” as a component of the more-encompassing title “Fundamentals of Village Design,” I propose, finally, that my GDP be an organized educational presentation of this same title.

There, that's my wish list. Is it attainable? Sure it is! I can effectively achieve all these goals, in fractalized for at least, by giving an educational tour of my beautiful Permaculture Demonstration Site or conducting a workshop at my thriving, semi-urban, community home-plot. (It really is all matter of scale and the emergent possibilities opening at ever more inclusive scales.) But since I have been in school for so long, and have not often been tempered by practical constraints, and have grown accustomed to Utopian imaginings, I am hoping for something a little bit more, maybe even something extra-ordinary. What follows then are the proposed initial design criteria for a more elaborate educational presentation of this subject I have chosen to call "Fundamentals of Village Design."³⁴ Since I believe this subject could easily accommodate (or will eventually accommodate) an entire degree – B.A. or M.A. – throughout the enumeration of the design criteria below I will substitute the specific Antioch term "Graduate Design Project" with the more future-oriented, possibility-pregnant term "program."

Statement of Purpose: "Fundamentals of Village Design" is an holistic, organically-derived, ekistic-based, systems-oriented, inter- and multi-disciplinary body of knowing intended to provide a firm epistemological base from which to begin conceiving, designing, and implementing truly sustainable human settlements for the 21st century. The underlying proposition is that in order to be truly sustainable – that is, continued into the indefinite future – human settlements must be organized at *village* scale, with all that implies. The offering of "Fundamentals of Village Design" as an organized educational experience will be designed in such a way so as to introduce to participants this proposition and to present successively the material that could lead them to the same conclusion.

The Criteria

- 1) The program will be necessarily grounded in Permaculture; Permaculture is the foundation. Ideally, each participant will be a Permaculture Design Course graduate so that the program can be presented as a form of Advanced Permaculture Design. Fundamental permaculture design principles will be reviewed and interwoven throughout the presentation as a common language. The last chapter of the Permaculture Designer's Manual, entitled "Strategies for an Alternative Nation," in which the concept of a Village Design within a bioregional

³⁴ I have studied and accumulated a large assortment of resource and reference materials, especially many books, to support this kind of educational presentation but have chosen not to list them here because this is still a design-in-process. The specific materials can be catalogued during the implementation stage of the GDP.

organization is given as the obvious basis for a sustainable culture, will be scrutinized in some detail.

- 2) The program will be a detailed exploration of the fundamental premise “in order to be sustainable, human systems must be modeled upon natural systems.” This premise will be further expanded by stating “in order to be sustainable, *human settlements* (or human habitation systems) must be modeled upon natural *living systems*.” This provides an opening for an extensive discussion of Living Systems Theory, especially as it can be applied to an ekistic analysis. The concept of Living Systems Theory and the idiomatic languaging involved will be interwoven throughout each and every level of the program organization and presentation, to the point that the program itself will be designed to be a Living System.
- 3) The program will be designed to be an elaboration and refinement upon the GEN-sponsored Ecovillage Design courses I attended as a participant; that is, I want the program to be firmly rooted in the exploratory conceptual initiative that began defining this whole momentum some 6 years ago now. In that sense, the program is not appearing ‘out of the blue,’ an arbitrary isolated event, but is instead aligned with the inceptive intentions of the greater global permutation. Additionally, the program will be designed to align with or supplement the emerging “Living and Learning Centers” ecovillage educational vision being formulated by GEN. Maybe the implementation of this program could ultimately be practice for GEN’s emerging “Gaia University?” Now that is a project I could enthusiastically resonate with.
- 4) The preliminary stages of the program will be devoted to articulating and providing a firm epistemological base from which to begin the actual conceptualizing and designing of ecovillages. This means a broad, comprehensive, multi-disciplinary overview of fundamental principles, in true ekistic fashion, drawing from the applied understanding to be gained from a selective investigation of the fields of Biology, Ecology, Human Ecology, Cultural Anthropology, Economics, Human Geography, Psychology, Sociology, Urban Planning, and Systems Theory. Pertinent information from these fields will be systematized and synergized into a useful, coherent, theoretical body of knowledge applicable specifically to envisioning the most optimal patterns, processes, and structures needing to be designed into truly sustainable human settlements.
- 5) It will be advantageous to examine prior settlement patterns that were effective in their times – that is, those that were able to successfully blend advanced, refined culture with long-term ecological viability. In this way, the primordial wisdom of the past will be used as modeling for the present. Additionally, it will be essential

to explore the upsurge of contemporary design alternatives, including: ecovillages, ecocities, ecohamlets, ecoaldeas, cohousing, intentional communities and the illusion of 'independence on 5 acres,' etc. These modern innovative initiatives will be analyzed and evaluated systemically, in turn, and conclusions will be drawn as to their capability for being organically integrated into larger natural meta-systems, their capability for being divided meaningfully into smaller, functional, integrated sub-systems, as well as their capability for blending advanced, refined culture with long-term ecological viability.

- 6) The program must be physically located at or have access to a place where real ecological design work can be administered and practiced, so that theory and practical application can be integrated into a holistic learning experience. It is tempting to want to imagine the design work taking place in virgin territory, where the proto-typical village of 5000 could be laid out all at once, from scratch. I believe this is undesirable, however, because there is already too much human encroachment on natural ecosystems. From that perspective, the most useful and practical design work may in fact be retrofitting an existing urban or suburban pattern to embody a full-featured, ecologically integrated village of up to 5000, with all that implies. The next best choice would be to actively participate in the design work of a newly establishing 'ecovillage,' so that the principles being promulgated in the program could be applied at the inceptive stages of a real project. In the absence of either of these options, the program could conceivably be focused on any ecological design or intentional community design initiative; but in these latter cases well below the targeted 5000 theoretical ekistic optimum, it must be explained that the design work is taking place on a scaled-down fractal, a divisible component of the whole, an organic unity that fits together holistically-systemically into a greater living entity.
- 7) This practical design component of the course will be presented as constitutionally *process-oriented*, meaning that *how* the design is arrived at will be given a higher evaluational priority than the actual tangible design work accomplished. In order to achieve this, a Group Design Process will be instituted. The Group Design Process is intended to bring to the fore the latent potential of the 'group mind,' where individual prowess and assertive leadership are de-emphasized so that each member of the design team, both the outspoken and the reticent, has an opportunity for an equal level of participation. The particular technique I will be practicing is widely used in Japanese corporate management circles and I will be adapting it specifically to a Village Design scenario. Although I can't remember the exact name for it, we used this technique effectively when setting up the Community Center in Tonasket.

- 8) The actual ecological design strategy that will be employed is the famously efficacious “transparency overlay” technique developed and refined by Ian McHarg in his seminal *Design With Nature* (1969). In this technique, a base map is first established and then relevant thematic overlays are drawn and laid successively on top of the base map. The result is a comprehensive, multi-layered, information-rich overview of all the essential factors to be considered in the site design. In effect, the site ends up designing itself! This aspect of the program will be facilitated from within the nexus of a “Design Studio,” and open-ended creativity will be encouraged and supported.
- 9) An important aspect of the ecological design work will concentrate on infrastructure and the notion of “soft engineering.” While the village will be presented as a “constructed ecosystem for human habitation,” this means far more than the creation of an elaborate super-garden (though it will be that as well). Roads and parking spaces will need to be sited and graded; the placement of utilities will need to be considered; village-scale renewable energy systems will need to be thought through and planned; buildings of all sorts – public, private, business, industrial, residential, emergency, schools – will need to be designed and placed. In all these cases, specific materials, techniques, specifications and codes will need to be evaluated, and architectural themes will need to be integrated into the overall design. This necessary engineering component of the program presentation is beyond my capability, however, and so I may need to employ the services of a professional (see #12 below).
- 10) The participants themselves will be organized as a coherent community, in so far as that is possible, simulating the community design team that would come together to initiate their own (eco)village project. In order to achieve this, “community building” (or more accurately, “community growing”) exercises will be enacted in the preliminary stages of the program and intermittently throughout, as needed to ensure cohesiveness. Regular time will be set aside to work through group dynamic issues, practicing communication and conflict resolution skills. Once again, the goal here is to create a living system, an autonomous unity that can assume a life of its own, potentially living on long after the program has expired. This effect is achieved superbly with Findhorn’s “Experience Week” format.
- 11) The program will be designed to be a “transforming learning experience,” meaning that, if successful, experiencing the program will induce a fundamental perception or paradigm shift in the participant. This intended shift could be described as the transition from a mechanistic/reductionistic to an organismic/holistic apperception of reality. In order to facilitate this perception shift, the program will

be presented as a whole – mind, body, spirit – educational experience. Exercises will be introduced whose purposes are to promote the integration of the ‘mind-body’ and ‘left brain-right brain’ dualities. Other exercises will be practiced whose purposes are to bring into play the use of all the senses and to explore ‘mind’ as the cognitive interface between and co-product of an organic unity in a relationship of structural coupling to its circumambient, co-evolving environment. In this sense, the nature of the environment will be shown to have a causal determination on the nature of mind: alter the environment and the mind will subsequently be modified. Could we not then purposely design the built environment to influence the manifestation of a spiritually-based, life-centered consciousness? Could not this intention be effected at settlement scale design?³⁵

- 12) Even though this proposed GDP is a very personal affair – the culmination of my M.A. degree in Whole Systems Design – it is very important that the presentation be a *collaborative* effort. Even though I will be ultimately responsible for the implementation of the program, I want to enlist the cooperation of some bright minds to help me fill it in and round it out with some knowledgeable expertise and experience. This will be, in effect, practice I the art of ‘team building.’ The presentation of a program with the title “Fundamentals of Village Design” will be a complex undertaking, and its degree of success may depend on the degree to which I am able to assemble and organize a talented, cohesive, inter-referenced ‘design and implementation team.’ By stating this, I am already intuiting that the GDP will be something more than the simple presentation of a class at Fairhaven College, where I could potentially be the sole Project Designer. At some point, I may actually need to give up the idea of presenting the program as ‘my’ project, and may instead need to offer my services as just one aspect of a larger ‘corporate body.’ I believe this is the ideal, and would be a mark of success – but where are the Village Designers?
- 13) In the same sense that I wish to assume the role of ‘meta-designer’ – that is, the designer of a design course – I wish to practice the delivery of the program as a ‘meta-teacher’ – that is, a teacher of teachers. This will be evidenced in the pedagogical climate where the focus will be not so much on relaying or transmitting information or knowledge *per se*, but on emphasizing the manner or method by which the information or knowledge can be derived – that is, the cognitive posture of inquiry by which each participant can re-create or re-present the essence of the program in some future space-time scenario of their own opportunity. In this way, at the conclusion of the program, the participants will

³⁵ Of course I would answer YES to these questions and have developed many ideas at many scales for how to induce this effect.

become like seeds scattered in the wind, some of which may find a fertile context in which to sprout and grow and reiterate the very organic process that was learned and hopefully embodied.

- 14) As a final design criterion, in order to be personally meaningful, the program must be motivated by and framed within ultimate spiritual goals. This does not mean religious conversion or otherworldly intentions but simply highlighting the fact that the purpose of all our work, all our designing, is to practically and consciously influence the positive, salutary evolution of humanity, and thus by extension and affiliation, all of Earthlife. I think it is completely appropriate to make this connection explicit, no matter who the student audience may be. To avoid any latent controversy or resistance, I have found it worthwhile to substitute the term “spiritual” with the phrase “consciously contributing to the health and needs of the Whole,” whatever whole may be chosen – family, community, planet, galaxy, etc. Still, it would be so much more enjoyable to be openly and honestly direct about it; then the program could be a real celebration, maybe in honor of the Mother Goddess Gaia. There could be singing and dancing and drumming and chanting. There could be massage and yoga and breathwork and meditation. These activities could be practiced in the mornings or evenings and/or intermittently throughout the day. There surely would be enlivening food and music and a central fire, and plenty of fun and games to balance the earnest mental work. All of this sounds very spiritual to me, sort of like a simulation of living in an ideal ecovillage, at least my version of an ideal ecovillage. Like my friend Erica says, “If it ain’t fun it ain’t sustainable.” So let’s enjoy ourselves!

My American heritage defines ‘criteria’ as the plural for “a standard, rule, or test on which a judgment or decision can be based.” The above 14 points then are the criteria I wish my Degree Design Committee to consider for final evaluation as I move forward now with the design and implementation of my GDP. I look forward to the upcoming ‘Candidacy’ meeting with my Committee and expect many useful critiques, suggestions, and recommendations as feedback toward choosing a suitable manner and milieu in which to present these ideas.

If my organic presumptions have any validity, then it should be possible to encapsulate and enfold these 14 criteria into an adaptable pattern that can be presented at any scale: from the workshop of a single day to a full four-year degree program. The presentation of a single day would be simply a fractal, a scaled-down holographic simulacrum of the essence of the material that would be presented in a full degree – the same fundamental principles and living process would be contained in each. Variations from a single hour to a single college quarter would also display this same fractalized

continuity. Presentations at larger, more-inclusive scales, however, open up emergent possibilities not present at smaller sub-scales. This makes me think that, just as there is an optimum scale for a human settlement, so must there be an optimum scale for the presentation of an organized educational experience with the title “Fundamentals of Village Design.” Perhaps, like a city, a four-year degree would be too large, impersonal, and cumbersome to be effective?

Epilogue

WE are living in an exciting, urgent, powerful, if at times bewildering and disorienting Age. A convergence of prophecies and predictions from many different cultural traditions points to these times as a critical transition zone for humanity, in particular, and planet Earth more generally: There is Millennium fever; there is a segment of society waiting for an Apocalypse and associated Rapture; there is the Hopi divination of the coming of a “Fourth World,” after the cleansing by fire of the “Third World” (Waters, 1963); the accurate Mayan calendar suddenly ends in the year 2012 signifying the end of a 5200-year cycle and the beginning of something entirely new (Arguelles, 1987; Jenkins, 1998); the Age of Aquarius is dawning (Rudhyar, 1970, 1975); some writers are expecting the Earth’s pole to shift anytime now (Braden, 1994; White, 1988); Hindu cosmology places our current predicament squarely in the Kali Yuga, a dark age of materialism (Klostermeier, 1994); Nostradamus, Zion, Babylon, Sirius, the Pleiades, etc. As intention is the attractor for eventual manifestation, as conviction and belief determinedly shape the unfolding appearance of reality, as the quantum level reveals THAT which is being looked for – then so much collective expectation (or is it desire?) for radical, monumental change is precipitating a transformation of consciousness, and thus of reality, of hitherto unparalleled proportions. To each his own.

Shifting down from the etheric realm of prophecy, a purely scientific evaluation of the momentum of the day also will lead to a similar conclusion: A major transformation is pending because a confluence of so many signals is indicating that human global systems are fundamentally altering natural global systems, causing uncertain chaotic disequilibrium; business cannot be carried on as usual. The Earth is heating up – sea levels are rising, glaciers are receding, and large chunks of Antarctica are slipping into the ocean. Precious topsoil is being blown away or washed into the sea as deserts relentlessly expand and marginal lands are salinized. Aquifers are drying up and lakes and rivers are poisoned as priceless freshwater supplies are squandered. Forests are cleared and wetlands are paved over as multitudes of living creatures go extinct from loss of habitat, meaning that millions of years of genetic diversity are being cashed in for quarterly profit earnings. Genomes are patented as the new techno-toy of biotechnology introduces novel manufactured life-forms that have not been integrated into the Web of Life, with consequences unknown. Exponentially intensifying human population pressure leads to

poverty, misery, scarcity, genocide, a perpetual state of war, and a gnawing sense of disease.³⁶

At the center of it all, that nouveau “global economy” that requires unrestrained, unlimited, and ever-increasing growth is running into the serious and real resource limitations of a finite, materially closed Earth. Yet, shockingly, instead of diverting its path so as to ameliorate and correct these conditions, this technocratic-capitalist global financial elite – the so-called “New World Order” – is entrenching itself even further and pressing forward with all its might. This shadowy New World Order, spearheaded now by a fascist executive administration that secured power illegitimately, seems determined at any cost to force its pernicious elitist agenda on the rest of the world. The United States military is now deployed around the globe to act as a proxy force to enable the aims of this global elite, which are, of course, to consolidate even more power and influence for themselves. It’s as if the head is warring with the body, as if the global elite are now warring with all other living things, including the Earth herself. I take this absurd insanity to be the inevitable culmination of the ever-increasing centralization and manipulation of arbitrary power that has been the defining characteristic thrust of the system called Western civilization, going back some 5200 years now.

Chaos Theory teaches that as a system approaches maximum unpredictable turbulence, circumstances are rich and fertile for the spontaneous emergence of a higher, more refined order; yet complete disintegration is also a possibility (Gleick, 1987). Whether or not the system is actually able to make the leap is not necessarily a matter of pure chance, for a physical or conceptual entity called a “strange attractor” may actually pull the evolving system towards itself, influencing, defining, and delimiting its emergent manifestation. It has been the explicit underlying thesis of this Context Paper that the developing concept of the “ecovillage,” with all that implies, is serving as a vital, potent attractor for these uncertain yet fecund times. The greater ecovillage vision is the ultimate solution to all the problems stated above. In that sense, the emerging field of *ecovillage education* is deserving of serious and unbounded attention and development.

With all that said, I would assert that in these days a complete re-evaluation of the human presence and purpose in the world is in order. What is the viability of a life-form that knowingly, systematically depletes and destroys the resource base upon which it depends? What is the ultimate meaning of the emergence of this life-form, *Homo sapiens sapiens*, within the larger cosmic evolutionary picture? What justification is there for the continued existence of a life-form that arrogantly presupposes itself to be superior to the

³⁶ All these catastrophes and many more, along with their potential solutions, have been ongoingly chronicled in the annual *State of the World* report published by Worldwatch Institute. There are many other resources and references in which to research these issues in great detail.

Whole of which it is merely a part? (And a completely expendable part at that, for Erathlife as a whole would be greatly assisted by the passing of *Homo sapiens sapiens*).

In an attempt to answer or at least approach these questions and to provide one more, this time universal, context for this Context Paper, please allow me to close with a bit of Socratic dialogue:

A Retelling of the Universe Story:

The astrophysicists have calculated the Universe to be 15 to 20 billion years old (Sagan, 1980). They claim there was an initial starting point of extremely dense, consolidated matter surrounded by absolute 'nothingness.' This consolidated starting point suddenly exploded in a "Big Bang" that sent matter hurtling outward to form our perceived expanding Universe of atoms and molecules, galaxies and stars, planets and organisms, events and potentialities. This highly materialistic theory further asserts that the Universe thus created is inexorably running down, eventually to expire in entropic heat death, a state of complete disorder and randomness. While *materially* calculable, from one point of view, this theory makes no provision for the presence of *Life*, which is by its nature negentropic or syntropic, always self-organizing highly improbable states of order and increasing complexity from out of the amorphous background of seemingly disorganized matter. By ignoring or de-emphasizing the pervasive and perhaps omni-present existence of Life, is not the paradigm forwarded by these scientists speculating only part of the story?

----- It would seem so

And since there have been a plethora of other universe creation stories formulated by countless other cultures around the globe, particular mythologies for their space and time and circumstances, can we not conclude that the Big Bang theory is essentially just another mythology, adapted to suit and support our specifically Western, materialistic culture?

----- Yes, I think that would follow, for the theory certainly cannot be proven.

Well then, continuing on with the scientific explanation, it is said that the Sun and its planets, including our Earth, were formed just 5 billion years ago (Sahtouris, 1989). That means that from the time of the supposed origin of the Universe to the creation of our solar system, some 10 to 15 billion years had already elapsed. Is it not conceivable that there were other solar systems started, other worlds self-organizing within that vast interceding time span?

----- Of course, that seems highly likely.

And of all the billions of stars with all their trillions of planets potentially created during this time span, is it not possible that there were many, or even a few, with conditions propitious for the germination of organic, carbon-based life as we know it?

----- OK, I'll give you that. I would suspect that organic Life, wherever it may appear in the Universe, must be carbon-based.

Well then, all these planets that preceded us in self-organizing Life would be in an advanced evolutionary condition compared to our planet Earth. Perhaps there are even planets that have reached evolutionary fruition or completion, their stars long ago having grown inhospitably too large and hot to support further organic extension and complexification.

----- Of course, I see what you mean. That would suggest there are precedents to what is happening on Earth. Organic life is not an isolated situation but is part of a greater galactic and universal experience. When conditions are favorable, Life will appear of its own accord. When conditions become unfavorable, Life will move on; but it is always happening somewhere. In some places it is only at the stage of developing unicellular organisms; in other places it has reached the level of primate-like organisms; and still other places it has advanced beyond that stage, to whatever that might be.

Yes! That is exactly what I am attempting to illustrate. But we can get even more specific than that by focusing on the *species* level. The word 'primate' or even 'humanity' is so general as to be vague. The primates are a diverse branch of Mammalia. At some point they evolved to the level that they could be ascribed human characteristics – industrial tool making, symbolic languaging, and especially the transmitting of culture (Clark, 1965). The paleontologists have further divided this humanness into distinct species – *Australopithecus*, *Homo habilis*, *Homo erectus*, *Homo neanderthalensis*, *Homo sapiens*...and now we've come to the point of distinguishing a species called *Homo sapiens sapiens* – modern civilized human beings! Tell me, do you consider Neanderthal to be human?

----- Interesting question. Not in common parlance because Neanderthal is considered to be so inferior to us. But then again, the Aborigines are similarly devalued, and now even the Muslims are sometimes stereotypically portrayed in this light, as were the Germans and Japanese in times past. But yes, you are right, from a scientific perspective Neanderthal exhibited all the essential characteristics of being human.

Yes they did. Neanderthal even had a larger cranial capacity than we do (Brace, 1967). Even now there are more genetic variations within a race than between races (Crapo, 1993). The point is that there is a continuum: Just as *Homo neanderthalensis* evolved into *Homo sapiens* that in turn differentiated into *Homo sapiens sapiens* – 'civilized' human beings – surely *Homo sapiens sapiens* is not the endpoint of Creation but will eventually evolve to the level that a detached observer may say that a new species has appeared.

----- Well that certainly puts things in perspective! It gives me a little hope that the current global dilemma may somehow be transcended. But what will the new species look or be like?

----- To knowingly answer that question it would be most helpful to gain an overview of the evolutionary progression on planetary systems that preceded us, for surely a precedent has already been set. Perhaps there is in place a sort of generalized universal template, a “morphogenetic field” (Sheldrake, 1981) to guide the evolution. In the meantime it will be useful to understand what the role of *Homo sapiens* was in the larger planetary body, the evolving Gaian consciousness of our Earthlife, originating in unicellular organisms some 3.9 billion years ago (Margulis and Sagan, 1995). What is it exactly that distinguishes *Homo sapiens* from all other species, including all other primates?

----- That is obvious: It is the conspicuous growth of a neocortex, the frontal lobe of the brain, with the ability for abstract, disembodied, time-independent thought and self-reflective consciousness (Rensch, 1972).

Excellent! And such a useful ability it was. It allowed for the rise of reason, objective understanding, and eventually all the technical wonders of civilization, including the epitome of human artifacts: the city. But, unfortunately, that same neocortex has become a source of imbalance. Its abstracting ability, coupled with a lack of a sense of responsibility, is now threatening to unravel the Web of Life, literally, at its very genetic core, and is erasing millions of years of planetary evolutionary complexity, placing great stress on the Biosphere. The advanced species *Homo sapiens sapiens*, the creator of civilization or city-based life, has unwisely placed itself above and outside of Nature, believing itself to be superior to and in control of Nature, bending Her to support its whims. Of course, all this is just an abstract illusion because *Homo sapiens sapiens* is forever an inherent *part* of Nature, and how could a mere part ever be above or outside of or superior to the Whole from which it is constituted?

----- That is an important consideration.

Yes, but we must have a happy ending to our story. Since *Homo sapiens sapiens* is inherently, somatically a part of living Nature, and since it is quite conceivable that this species level has already appeared on more advanced planetary systems, then we can assume that this species is not necessarily an evolutionary dead-end or mistake, but actually has a purpose. If that is so, then what possible function could the development of an abstracting, separating neocortex serve within the overall organic cycle?

----- That, my friend, is a very good question, but I know not the answer.

Well consider: the abstracting neocortex has facilitated the emergence of highly advanced technologies, essentially extensions of our sense organs. By way of these extended sense-organ technologies, Gaia has placed herself in outer space, outside of the

biospheric milieu, to look back upon Herself and witness all Her vibrant, dazzling, azure splendor. Is that not a remarkable achievement?

----- Well yes, you are certainly right; that achievement is quite remarkable, if not downright mystical.

Then consider further: Is not the ability of Gaia to place Herself outside of Herself and to objectively witness Herself an image or metaphor of coming to self-reflective, self-conscious awareness?

----- That does seem plausible. As *Homo sapiens sapiens* was the species on the planetary evolutionary progression that came to self-reflective, self-conscious awareness, by systemic extension it would necessarily generate that same function in the greater whole of which it is a part, as an organ to a body.

Yes, that is Whole Systems thinking. Earthlife viewing itself from afar facilitated a sense of planetary unity, the indisputable visual affirmation that we really are One, that we are all in this together. This unitary global perspective has been recently enhanced by the proliferation of Internet technology, a sort of partnership with silicon-based life that is emerging as a global quasi-brain. The illusory perception of isolated, independent egos standing outside of Nature that was created by an abstracting neocortex is now being transcended by the very technologies produced by this mental organ! *Homo sapiens sapiens*, while believing itself to be in control as the pinnacle of Creation (what hubris!), has been all along merely a temporal function of a much greater planetary evolutionary cycle.

----- That is quiet ironic, and quite profound.

Well then, here is a conclusion: *Homo sapiens sapiens* is that stage in a planet's organic evolution when it develops the ability to rapidly transmute the material component of itself into so much random, sensory-extended technology, ushering in the ability to purposefully experience itself as a unified, self-reflective, self-conscious awareness (Arguelles, 1987). This is the initiation of what could be called, on Earth, Gaian self-awareness, the recognition of a greater, whole-planet, collective intelligence. Gaia, the planetary entity, is coming to know Herself, and that is something to celebrate.

----- Wait a minute! There are so many loose ends! How can you be ready to celebrate when it seems that humanity is consistently on the verge of destroying itself and messing up the whole planet.

There you go using that limited term 'humanity' again. Please be more specific. Do you speak of the evanescent *Homo sapiens sapiens* or the emerging new species that is already manifesting itself? I would agree with you that *Homo sapiens sapiens* is making a mess of things, yet they were predisposed to the type of behavior we are observing; they cannot and will not change. Their function has been fulfilled and their time is up. The emerging new species is a direct evolutionary response and correction to the mechanistic

excesses of *Homo sapiens sapiens* and is a further complexification of the Gaian evolutionary progression, a progression that is now aware of itself progressing.

The emerging new species understands intuitively, corporeally, that it is an organic part of the Whole and that it must attend to the health of the Whole in order to ensure in its own health. The new species still has a neocortex, of course, and abstract reasoning capabilities, but it is most specifically characterized by a conspicuous growth in the *posterior* of the brain to offset the imbalance caused by the neocortex. By developing this region closer to the spinal column and thus to its biological roots, this new species once again feels a natural connection with all of Earthlife and will become a conscious agent in positive, life-affirming Gaian evolution. The new species regards as self-evident their unity with Nature (What else *could* it be? Really.) Comfortably immersed in this acknowledgement, acutely aware of their function within the total Gaian network, they will set about their task: enhancing *Life* with every act, retarding entropy because of genetic predisposition, enriching the economy of Nature *by design*, without resistance or contention. Biological evolution has been punctuated throughout by spontaneous discontinuous leaps during times of excessive stress (Augros and Stanciu, 1987). *Homo sapiens sapiens* is transitioning into *Homonovus* (Richards and Richards, 1973). The Golden Age of Earth is close at hand.

And of course, *Homonovus* will be choosing to live in full-featured ecological villages harmoniously integrated into Nature, so we better get busy learning how to create these “vibrantly fertile wombs” so the new species can emerge itself. There is much work to be done!

References Cited

- 1) Alexander, Christopher. Ishikawa Sara & Murray Silverstein (1977) *A Pattern Language*. Oxford University Press; New York
- 2) Alexander, Christopher (1979) *The Timeless Way of Building*. Oxford University Press; New York
- 3) Arguelles, Jose (1987) *The Mayan Factor*. Bear & Company; Santa Fe, NM
- 4) Ashmore, Wendy, editor (1981) *Lowland Maya Settlement Patterns*. University of New Mexico Press; Albuquerque
- 5) Augros, Robert & George Stanciu (1987) *The New Biology: Discovering the Wisdom in Nature*. Random House of Canada, Ltd.; Toronto
- 6) Bane, Peter, publisher (1996) "Village Design." *Permaculture Activist*, Issue #35, November
- 7) Bateson, Gregory (1972) *Steps to an Ecology of Mind*. Ballantine Books; New York
- 8) Brace, C. Loring (1967) *The Stages of Human Evolution*. Prentice-Hall; Englewood Cliffs, NJ
- 9) Braden, Gregg (1994) *Awakening to Zero Point: The Collective Initiation*. Braun-Brumfield, Inc., Ann Arbor, MI
- 10) Capra, Fritjof (1996) *The Web of Life: A New Scientific Understanding of Living Systems*. Anchor Books, New York
- 11) Carter, Vernon Gill & Tom Dale (1974) *Topsoil and Civilization*. University of Oklahoma Press; Norman
- 12) Catton, William R., (1982) *Overshoot: The Ecological Roots of Revolutionary Change*. University of Illinois Press; Urbana
- 13) Clark, W.E. LeGros (1965) *History of the Primates: An Introduction to the Study of Fossil Man*. The University of Chicago Press; Chicago
- 14) Clinton, Hillary (1996) *It Takes a Village: And Other Lessons Children Teach Us*. Simon & Schuster; New York
- 15) Crapo, Richley H. (1993) *Cultural Anthropology*. Dushkin Publishing Group; Sluice Dock, Guilford, CT
- 16) Critchfield, Richard (1983) *Villages*. Anchor Books; Garden City. NY
- 17) DeRohan, Ceanne (1985) *Right Use of Will*. Four Winds Publications; Santa Fe, NM
- 18) DeRohan, Ceanne (1986) *Original Cause: The Unseen Role of Denial*. Four Winds Publications; Santa Fe, NM
- 19) DeRohan, Ceanne (1987) *Original Cause: The Reflection Lost Will Has to Give*. Four Winds Publications; Santa Fe, NM
- 20) Doxiadis, Constantinos (1968) *Ekistics: An Introduction to the Science of Human Settlements*. Oxford University Press; New York
- 21) Doxiadis, Constantinos (1977) *Ecology and Ekistics*. Westview Press; Boulder
- 22) Fuller, R. Buckminster (1969) *Utopia or Oblivion: The Prospects for Humanity*. Bantam Books; New York

- 23) Gilman, Robert (1991) "Eco-Villages and Sustainable Communities around the World." *In Context*, #29, Summer
- 24) Gilman, Robert, et al. (1991) *Eco-Villages and Sustainable Communities: A Report for Gaia Trust*. Context Institute; Bainbridge Island, WA
- 25) Gleik, James (1987) *Chaos: The Making of a New Science*. Penguin Books; New York
- 26) Harman, Willis & Howard Rheingold (1984) *Higher Creativity: Liberating the Unconscious for Breakthrough Insights*. Jeremy P. Tarcher, Inc.; Los Angeles
- 27) Hudson, J.S. (1970) *A Geography of Settlements*. MacDonal & Evans, Ltd.; London
- 28) Hyams, Edward (1976) *Soil & Civilization*. Harper Colophon Books; New York
- 29) Jackson, Hildur & Karen Svensson, editors (2000) *Ecovillage Millennium: News from the Global Ecovillage Network*. Gaia Trust; Naerum, Denmark
- 30) Jacob, Francois (1974) *The Logic of Living Systems*. Hazell, Watson and Viney, Ltd.; Aylesbury, Bucks, UK
- 31) Jantsch, Erich (1975) *Design for Evolution*. George Braziller; New York
- 32) Jantsch, Erich (1980) *The Self-Organizing Universe: Scientific and Human Implications of the Emerging Paradigm of Evolution*. Pergamon Press; Oxford, UK
- 33) Jenkins, John Major (1998) *Maya Cosmogogenesis 2012*. Bear & Company Publishing; Santa Fe, NM
- 34) Klostermeier, Klaus (1994) *A Survey of Hinduism*. State University of New York Press; Albany
- 35) Kotke, Wm. H. (1993) *The Final Empire: The Collapse of Civilization: The Seed of the Future*. Arrow Point Press; Portland, OR
- 36) Lovelock, James (1979) *Gaia: A New Look at Life on Earth*. Oxford University Press; Oxford, UK
- 37) Mare, E.C. (1997) *Village Design: Ekistics for the 21st Century*. Concentration Proposal for Fairhaven College
- 38) Mare, E.C. (1999) *Classic Maya Settlement Patterns*. Village Design Institute; Bellingham, WA
- 39) Mare, E.C. (2000) "Designing My Own Education for the Ecovillage Millennium." *Communities: A Journal of Cooperative Living*, Issue #108, Autumn
- 40) Mare, E.C. (2000) *Ecovillages as Living Systems: Reviewing and Renewing Organic Settlement Patterning*. Village Design Institute; Bellingham, WA
- 41) Mare, E.C. (2000) *An Introduction to Ecovillage Economics*. Village Design Institute; Bellingham, WA
- 42) Mare, E.C. (2000) *Sustainable Cities: An Oxymoron?* Village Design Institute; Bellingham, WA
- 43) Mare, E.C. (2001) *The Ecovillage as a Living Cell: Biological Structures and Metaphors*. Village Design Institute; Bellingham, WA
- 44) Mare, E.C. (2001) *Classic Egyptian Settlement Patterns*. Village Design Institute; Bellingham, WA
- 45) Margulis, Lynn & Dorian Sagan (1995) *What is Life?* Simon & Schuster; New York
- 46) Maturana, Humberto & Francisco Varela (1980) *Autopoiesis and Cognition: The Realization of the Living*. D. Riedel; Dordrecht, Holland

- 47) Maturana, Humberto & Francisco Varela (1988) *The Tree of Knowledge: The Biological Roots of Human Understanding*. Shambhala; Boston
- 48) McDermott, Robert (2001) *The Essential Aurobindo: Writings of Sri Aurobindo*. Lindisfarne Books; Great Barrington, MA
- 49) McHarg, Ian (1969) *Design with Nature*. John Wiley & Sons, Inc.; New York
- 50) Meadows, Donella, Meadows, Dennis & Joergen Randers (1992) *Beyond the Limits: Confronting Global Collapse: Envisioning a Sustainable Future*. Chelsea Green Publishing Company; White River Junction, VT
- 51) Miller, James (1978) *Living Systems*. McGraw-Hill; New York
- 52) Mollison, Bill (1988) *A Permaculture Designer's Manual*. Tagari Publications; Tyalgum, NSW, Australia
- 53) Odum, Howard T. (1971) *Environment, Power, and Society*. John Wiley & Sons, Inc.; New York
- 54) Odum, Howard T. & Elisabeth C, Odum (1976) *Energy Basis for Man and Nature*. McGraw-Hill Book Company; New York
- 55) Odum, Howard T. (1996) *Environmental Accounting: EMerger and Environmental Decision Making*. John Wiley & Sons, Inc.; New York
- 56) Prigogine, Ilya & Isabelle Stengers (1984) *Order Out of Chaos: Man's New Dialogue with Nature*. Bantam Books; New York
- 57) Rensch, Bernhard (1972) *Homo Sapiens: From Man to Demigod*. Columbia University Press; New York
- 58) Richards, Fred & Ann Richards (1973) *Homonovus: The New Man*. Shields Publishing, Inc., Boulder, CO
- 59) Rudhyar, Dane (1970) *The Planetaryization of Consciousness*. Aurora Press; New York
- 60) Rudhyar, Dane (1975) *The Sun Is Also a Star: The Galactic Dimension of Astrology*. E.P. Dutton & Co., Inc.; New York
- 61) Sagan, Carl (1980) *Cosmos*. Random House, Inc., New York
- 62) Sahtouris, Elisabet (1989) *Gaia: The Human Journey from Chaos to Cosmos*. Pocket Books; New York
- 63) Sale, Kirkpatrick (1980) *Human Scale*. Perigree Press; New York
- 64) Schmookler, Andrew Bard (1984) *The Parable of the Tribes: The Problem of Power in Social Evolution*. University of California Press; Los Angeles
- 65) Sheldrake, Rupert (1981) *A New Science of Life: The Hypothesis of Formative Causation*. Blond & Briggs; London
- 66) Spangler, David (1996) *Everyday Miracles: The Inner Art of Manifestation*. Bantam Books; New York
- 67) Thompson, William Irwin, editor (1987) *Gaia: A New Way of Knowing*. Lindisfarne Press; New York
- 68) Toynbee, Arnold (1948) *Civilization on Trial*. Oxford University Press; New York
- 69) Varela, Francisco, Thompson, Evan & Eleanor Rosch (1993) *The Embodied Mind: Cognitive Science and Human Behavior*. The MIT Press; Cambridge, MA
- 70) Von Bertalanffy, Ludwig (1968) *General Systems Theory*. George Braziller; New York

- 71) Waters, Frank (1963) *The Book of the Hopi*. Penguin Books; New York
- 72) White, John (1988) *Pole Shift: Predictions and Prophecies of the Ultimate Disaster*. A.R.E Press; Virginia Beach, VA
- 73) Worldwatch Institute (1984-2001) *State of the World: A Report on Progress Towards a Sustainable Society*. W.W. Norton & Company; New York
- 74) Zeleny, Milan, editor (1981) *Autopoiesis, Dissipative Structures, and Spontaneous Social Orders*. Westview Press; Boulder, CO