Learning is never the transmission of knowledge; it is the complexification of a closed, self-referring nervous system that has integrated new behavior potential.

Since my last self-assessment, I have moved out into the realm of Independent Studies, designing two this past quarter for 3 credits each. One was entitled “Living Systems Theory;” I perceived this to be the core of my work at Antioch, the essence of Village Design, and the reason for pursuing a degree in Whole Systems Design. Another was entitled “Cognition Theories;” I thought of this study as my opportunity to investigate the work of Maturana and Varela, and others, and to come up with some theories about learning. In my head, as I approached these studies, I imagined two distinct subjects with two distinct goals: “Living Systems Theory” would entail reading books that would provide me with the language and ideas for scientifically describing villages as “living systems.” “Cognition Theories” would entail reading books designed to give me insights into the way people learn, and so give me substantive ideas for setting up an Academy whose pedagogy is designed with these principles in mind. (This last goal was initiated a few years ago when I first read Capra’s *The Web of Life*, when I intuited that the cognition theories presented therein were an obvious approach for an Academy of Village Design).

Elaine Jessen, who agreed to evaluate the Living Systems Theory study, pointed out that, to her, the cognition theories of Maturana and Varela were the heart of Living Systems Theory, and so these two studies are inherently complementary, certain to overlap, and not so easily segregated. She turned out to be exactly right: despite my assurances of distinct organization, in the end these two separately listed studies merged into one grand, eye-opening investigation into the origins of Life on Earth, its evolution as a cognitive living system, the emergence of human beings as abstract cognitive living systems, and a projection into the future based on this evolutionary trajectory.

I began by reading Elisabet Sahtouris’ *Gaia: The Human Journey from Chaos to Cosmos* (1989). This book set the tone for the next couple month’s work. It was the first time I had a chance to be exposed to the entire progression of the evolution of Life on Earth in one sitting, and the scope of this work was mind-expanding for me. I then moved on to another ‘Gaia’ book, a collection edited by William Irwin Thompson entitled *Gaia: A Way of Knowing* (1987). All the contributors were chums, and they were, as a collectivity, defining the cutting edge of Living Systems Theory. I took a break from that Independent Study for awhile, and went on to
Cognition Theories. My recently reinforced Gaia perspective set me in just the right frame of mind for what I was about to discover.

In rapid succession I read *The Tree of Knowledge* (1987) and *Autopoiesis and Cognition: The Realization of the Living* (1980), the collaborative works of Maturana and Varela, and then *The Embodied Mind* (1991), further elaboration on the initial theories by Varela with new cohorts. “Rapid succession” is actually an exaggeration because these books (especially 1980) were laborious to get through. Not only were the authors introducing new concepts, they were using a new language to present their ideas. At times, I would have to read a paragraph three or four times to comprehend the concept that was attempting to be conveyed. I added some “autopoiesis material” from the Internet to see if I could grasp the concepts more readily with someone else’s ‘languaging.’ “Rapid succession” more accurately portrays the situation that, before I knew it, three weeks had gone by and I was looking at the world through an entirely different lens.

This was the greatest benefit and achievement of this quarter’s work: after being exposed to these cognition theories, I began to see myself and relate to the world as a biological organism. Combined with my just-studied Gaia insights, I even saw myself as just the most recent adaptation in a long history of biological organisms. This entire progression is the holistic essence of Gaia. I knew without a doubt that I was the product of a long history of evolution, and this provided me with a sense of awe and wonderment as I came into daily contact with other biological life-forms. I was amazed to realize my close anatomical and neurological connection with frogs, for example (frogs kept coming into my life). It was quite profound for me to realize that we are all “bringing forth a world” together, all the life-forms on Earth, and this reinforced my ecological, biocentric, deep ecology perspective. I began to see my *ego*centric ‘self,’ the self that I have given so much attention to, as some kind of abstract formulation brought about by my ability to conceptualize in a “linguistic domain.” It hardly seemed worthy of consideration because it is so illusory. What was exceedingly meaningful for me was identification with the entire 3.5 billion-year progression. As a consequence of undertaking this study, Cognition Theories, this awareness was brought to the fore more deeply and forcefully than ever before. It was humbling and at the same time enlivening, freeing – for my little ego-self is such a small part of the total picture, it can’t possibly do any harm. I found myself identifying with Gaia herself, and wishing to act in her behalf, as a conscious agent of evolution. And I could even feel myself looking at the Sun in a new way.

I wanted to capture all these thoughts/sensations/feelings while they were still fresh, so I began to write my own version of the history of Life on Earth through this new perspective. *Life implies Cognition:* “All living systems are cognitive systems.” “Living as a process is a process of cognition.” Thus, if the solar system, for example, has all the characteristics of living systems, then the Sun must be cognitive, a point of intelligence. Likewise for the Earth and all the living systems that comprise the Earth – they must be cognitive. And if an ecological village
could be described as embodying all the characteristics of a living system, then it too must be
cognitive, and alive. The context in which we live is all one big field of cognitive intelligence,
tracing all the way back to the galactic center, and progressing forward through evolution all
the way to the situation of the present day. This was the kind of scope I wanted to present in
my writing, so the initial intention of conceptualizing a pedagogy for a hypothetical school
seemed outdated. This is the consequence of envisioning a finished product before the work is
even begun.

After my dizzying bout with Cognition Theories, I went back to Living Systems Theory. I
scanned Miller’s voluminous Living Systems but it seemed boring by that stage of the study. I
went on to Design for Evolution (1975) by Erich Jantsch, and this proved enlightening, for here
was a systems attitude from the mid-70s that would attempt to consciously ‘design’ the entire
universe if it could. In this book, Jantsch was attempting to provide the theoretical groundwork
for designing a new ‘culture’ or ‘society.’ It started out interesting enough; but then my new
identity as a biological organism immersed in the evolution of a larger living system flashed an
objection: “Stop! Wait! This is becoming nauseating! What you are attempting to design is a
machine, and you would have me live inside it.” It was clear from my immersion in the thinking
of Maturana and Varela that living systems, living things, are self-organizing, self-creating, and
cannot be designed – they manifest themselves when the conditions are right. In concurrence
with a meeting with my advisor, it became clear to me that the word ‘design’ needed to be
employed with some temperance. I realized that the way I have been using the term ‘Village
Design’ approximates the way Jantsch was describing “design for evolution.” Since I interpreted
his stance as a call for social engineering, and since that is not the organic intention in the
design of villages, I realized I must be very careful how I use this powerful word ‘design.’

My second paper picked up where the first one left off – with the emergence of Homo sapiens in the long evolution of Earthlife. It concluded that the rise of civilization and the crises of the 20th century were inevitable, and that the obvious solution now is to begin ‘growing’ ecological communities. My recent insights into the potential misuse of the word ‘design’ led me to conclude that these communities are better not designed (in the sense of an all-knowing, conscious Master Plan) but are better left to unfold of their own accord. A ‘designer’ can certainly be a useful presence: by insightfully introducing measured patterns, processes, and structures, the designer can influence a desired or consensused direction, but the designer should not be rigidly attached to an outcome, because the ‘living system’ will need to develop a life of its own. This was a very useful lesson to learn and made this study exceedingly worthwhile.

To complete the writing, I found it necessary to reread much of Capra’s The Web of Life, as well as review Schmookler’s The Parable of the Tribes, Arguelles’ The Mayan Factor, and bits and pieces of many other previously read books and notes. I finally ended with Bateson’s Steps to an Ecology of Mind (1972), but by that time most of the writing was done (though he has
introduced ideas for further writing). All told, my writing this quarter reached a whole new level of scope and depth: the first paper was 25 pages, up from a previous record of 13; the second was a continuation of the first and reached 30 pages of its own, combining to make 55 pages of text! This was a level of organization I’ve never achieved before – but then I’m extremely fascination by the subject matter and could have kept on writing were it not for the arbitrary deadline of a quarter. The jury is still out as to quality; but I am satisfied. The first paper required such an unusually early turn-in time that it is not nearly as well-written or refined as the second, and will require touching up when I get back.

The reading and writing consumed all my time this past Winter. That’s fine: I enjoyed it, but I believe I short-changed myself by registering for only 6 credits total. I was easily putting in 12-hour days, five days a week. Since I was compelled to cram all my work into eight weeks, that meant I easily put in 480 hours for these two Independent Studies. At 33 hours per credit, I theoretically managed to accomplish 14 credits worth of work. Next time, I will attempt more accurately to portray the work-load in the credits proposed. I always seem to end up doing more work than is ‘required.’

There were a couple highlights this quarter outside of school that have immediate relevance to my larger work: 1) The Global Ecovillage Network put out their first journal in January of this year, and called it “The Ecovillage Millennium.” Hildur Jackson, publisher, previously asked me to send a picture of myself to include in this issue. She sent me a copy of the journal with a handwritten note that explained that my story will be in the next issue instead. As I was writing my papers this quarter, especially the second one, I wrote as if my audience was the Global Ecovillage Network. 2) The director of an ecovillage education consortium called “Living Routes,” associated with the Global Ecovillage Network, has asked me to write an article for the upcoming Autumn issue of “Communities” magazine, devoted to community education.

It was very rewarding to undertake and immerse myself in these studies this Winter, even if at the virtual exclusion of other life interests – but hey, I look forward to an occasional winter hermitage. I believe the peace, solitude, and ample meditation-time allowed for profitable distillation into the unconscious of the ideas being presented. “Living Systems Theory” and “Cognition Theories” are two fields of study I’ve been wanting to take a close look at for some time now. Now that the work is completed, I find myself with a wide array of new conceptual and languaging tools from which to fashion the ideas and intentions I would like to present to the world. I also discovered the essential need for clarity in this presentation, lest it be misunderstood.

At the same time, I feel my work has become so abstract and theoretical lately – characteristic of a graduate education. This kind of work certainly has a place, but now I feel the
need to swing back to the other pole and explore some more practical fields, especially since Springtime has arrived.

I am pioneering Village Design education; this is the feedback I get from people in the field. My goal is to participate in the design and construction of the world’s first fully-functioning ecological village, which will have at its center an Academy of Village Design. I do not want to end up with a desk job; I want to be out in the field, getting my hands dirty. For that reason, I want to integrate into my education such topics as environmental, structural, and soil engineering, advanced solar design, bioremedial wetlands construction, architecture and landscape design, etc. These kinds of subjects will provide a well-rounded Village Design education to complement the two quarters of systems theory thus far. To see the ecological village manifest itself requires coming down out of the theoretical realm (from time to time) and moving into the practical, sowing and growing phase. Likewise, those attracted to a Village Design education will be benefitted by a mixed bag of theory and concepts, followed by practical solutions to implement them.

The goal is to be very balanced. This is my mage as I set my sights on devising Independent Studies for Spring Quarter. This goal and this image was part of my vision that was readily accepted at my entrance interview to AUS.

E. Christopher Mare
28 March 2000
Lummi Island