

# **“Ecology of Consciousness”**

## **A Chapter for the Ecological Key of the Ecovillage Design Education**

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What is an “ecology of consciousness?” Let’s begin like Socrates by defining our terms: “The word ecology is derived from the Greek *oikos*, meaning “house” or “place to live.” Literally, ecology is the study of organisms “at home.” Usually ecology is defined as the study of the relations of organisms or groups of organisms to their environment, or the science of interrelations between living organisms and their environment” (Odum, 1959, p. 3). The key word here is *relations*; for ecology can be considered much more than a “science.” In a broader sense, ecology can be viewed as a way of perceiving the world, a world literally teeming with relationships. This perspective has serious implications for a socio-economic order founded on the sanctity of the individual, so much so that Paul Shepard, during the “consciousness revolution” of the ‘60s, was moved to describe ecology as “the subversive science.” Ecology can be “subversive” because with ecological understanding there is less meaning to be gained from looking at individuals in isolation than knowing how these individuals exist and interact *in relationship*.

Consciousness is a slipperier term: One study (Baruss, 1987) found that the word “consciousness” can assume 29 different definitions! As ecovillage designers, which definition are we to align with? Well, for the purpose of this article, why don’t we align with the definition formed by an ecologist? According to Cotterill (2000), consciousness is “intimately connected to self-paced probing of the environment...present even in the simplest monocellular organisms” (p. 283). “Consciousness lies at the operational interface between body movement and the body’s surroundings” (p. 285). I like this image very much, for it means that consciousness is not a ‘thing’ that one ‘possesses,’ as an isolated individual, but rather is an “operational interface,” a relationship. Consciousness is not contained simply ‘in the head’ but rather is a product of relationship – the inherent, mutually-defining relationship between a body and its environment. Does this mean that the quality of the environment could influence the quality of consciousness?

I think the eminent Chilean biologists Humberto Maturana and Francisco Varela would answer with a resounding “**yes.**” They developed a concept called “structural coupling,” an iteration of the “interface” theme as defined by Cotterill. According to this concept, “the organism both initiates and is shaped by the environment...we must see the organism and environment as bound together in reciprocal specification and selection” (Varela, et al., 1991, p. 174). What this means is that the quality of consciousness is not a ‘pregiven’ – that is, already

formed and determined at birth – but rather is the result of an ongoing history of “structural coupling,” or “operational interface,” between an organism and its environment. “As humans shape the systems in and through which they live, they are in turn shaped by their human systems” (Jantsch, 1975, p. 61). Or, in the stately words of Winston Churchill: “We shape our buildings, and afterward our buildings shape us” (quoted in Dubos, 1968, p. 190). Apparently, after WWII there was a proposal to build an entirely new House of Commons to replace the one that had been damaged in the war. Churchill strongly rejected this proposal on the grounds that conducting government in a new building would irretrievably alter the nature of the dialogue that had proceeded for centuries. The House of Commons was repaired instead.

Now that we have defined our terms, it is possible to move forward with a synthesis: “ecology of consciousness” is the understanding that states of awareness (consciousness) are facilitated – even defined – by the nature of the ecology through which the perceiving body must move. But what exactly does this mean in real life?

Think about the Greek root for ‘ecology’ – *oikos*, meaning “home” or “place to live.” Now imagine two persons living in two very different kinds of places: The first person lives in the core of a large crowded city, and the second person lives in a dispersed suburb at the fringe of a metropolitan area. What will consciousness be like for these two people?

For the first person – let’s call her Maria – there is an overload of discordant vibrations: intrusive traffic sounds, jackhammers, sirens, glares, helicopters, strange smells, unwelcome stares, and all sorts of electro-magnetic radiation. There is such an overload that Maria gradually becomes de-sensitized: her nervous system begins to shut down to protect itself. Perhaps Maria is living in a square room up on the 12<sup>th</sup> floor from where she is never able to step out onto the grass and smell the flowers. As soon as she goes down to street level and steps outside the door, she is surrounded by strangers, so she must put up a psychological defense barrier. There is great danger moving through this urban ecology, so Maria must remain hyper-vigilant, always scanning her surroundings to be on guard for a possible threat. As a result of living in these conditions day after day, Maria’s body begins to become rigid, her posture slightly bent over to protect the heart area, her *chi* or life-force no longer flowing freely.

For the second person – shall we say John – there is adequate open space with plenty of trees, yet a conspicuous lack of people. The only people John sees are encapsulated in the shells of their little automobiles. John has neighbors but he rarely gets a chance to interact with them because as soon as they return home they drive into their garage and disappear into the house. If John needs food, or medicine, or a job, he too must get into his little automobile and drive all over the metropolitan area. This means that his experience of the suburban ecology is always mitigated or deafened by the steel enclosure in which he must move; thus John’s nervous system also becomes de-sensitized, his body posture accustomed to an unnatural sitting position with legs forward and hands on the wheel. Lacking meaningful stimulation with

people or environment, John, like many of his neighbors, starts to feel isolated. He, like they, increasingly turn to artificial stimuli – electronic media, drugs and alcohol, consumerism, dysfunctional nuclear-family dynamics – in an attempt to fill the empty niche.

While these two examples may be situated at extremes, and while I may have dabbled in stereotyping (please excuse me if these portrayals represent people you know), the purpose was to highlight clearly the relationship that exists between states of awareness (consciousness) and the nature of the ecology through which the perceiving body must move. In both cases above, the nature of the ecology – the relationships that exist in the environment – compels the nervous system to de-sensitize. In the first case, a modern urban ecology, there are far too much stimuli, especially of an aggravating kind, so the nervous system begins to shut down. In the second case, a typical suburban ecology, there are not enough stimuli; the relationships existing in the environment do not enable satisfying interaction and so the nervous system begins looking for artificial stimulation. From this perspective, we could determine that the interface between ecology and a moving body is mediated and translated through a nervous system, and it is the activation or stimulation of this nervous system that produces state of awareness that we call consciousness. Obviously, then, if we want to expand or enhance consciousness we must learn how to create ecologies that activate or stimulate the nervous system in a most optimal, beneficial way.

In order to test this hypothesis, let's imagine a third person living in an 'ecovillage.' The ecovillage, by definition (Gilman, 1991), is symbiotically integrated into the local ecology, so there is an interesting interface between fractal Nature and the ordered built environment where the humans live. The ecovillage is compact, segregated into clusters of residential units which encourage 'variations on a theme' and a sense of inter-identity that complements the overall village identity. The ecovillage is arranged to have a well-defined boundary with a well-defined entrance, so there is a comforting sense of enclosure when one is 'in' the ecovillage and a sense of psychological transition as one exits 'out' into the greater unknown. The ecovillage also has a well-defined center which supports the possibility for feelings of common unity. As one moves away from the center towards a cluster, the feeling of unity transitions into a sense of subculture identity which then further evolves into a feeling of full individual identity as one enters a personal living space. So, in this case, we can see how the general morphology of the settlement ecology facilitates a variety of states of awareness: consciousness has multiple perspectives of 'parts within wholes' from which to view its experience: the nervous system is continually engaged in orienting itself in space and time with nested levels of differentiation, all contained within a complex yet coherent whole.

Now what would it look like to take this idea to finer levels of detail and as designers begin to imagine the interior circulation patterns of the ecovillage? Of course it is axiomatic that automobiles are left at the edge, so it is an interesting "pedestrian environment" that we are creating for people walking or riding bicycles, maybe even horses and carts and electric

shuttles. First off, avoid straight lines! The roads and pathways should conform to, even amplify, the existing features of the terrain. Pay special attention to “view corridors” and existing landmarks such as special trees or rock outcroppings. The experience of moving through the space should be like a gentle massage for the nervous system: exceptional views or features should be approached with a sense of anticipation, gradually unfolding their splendor as the perceiving body moves around a curve, partly obscuring their approach behind some plantings, fencing, or buildings. In this kind of way, the nervous system always is actively involved with expectation, eagerness, possibly excitement; the awareness is continually drawn to the next level of experience, fulfillment, or understanding. This is an example of organizing the ecology so as to enhance consciousness.

We can then take the design to even deeper degrees of refinement. What does it take to optimally stimulate a nervous system? We can knowingly choose and work with the full palette of design enhancements, activating awareness at ever more subtle levels: colors, hues, textures, scents, sounds, shapes, harmonies and rhythms and reiterations on a theme, depth perception, the characteristics of various plants and the rotation of blooms through a season, the skilled placement of various water features and artwork, etc. We can become familiar with what are called “sacred geometries,” incorporating proportions according to the Golden Mean and the Fibonacci spiral. We can explore disciplines such as Feng Shui and Geomancy, learning how to perceive and work with the unseen energies of a site, designing around vortexes and ley lines and accumulated past histories. We can assume a fourth-dimensional perspective and realize that all is in flux, in evolution, and every act of the present becomes the seedbed for future potentialities. In short, there are infinite design possibilities for managing a site to achieve its optimal potential.

The “ecology of consciousness” is truly a multi-faceted, multi-dimensional, multi-disciplinary perspective that assumes that our potentials as human beings are intimately connected to the quality of the environments in which we live. Once we have integrated this understanding, it becomes clear that the most important thing we can do, as a species, is to design holistic environments that actually *enhance consciousness* – places where the people moving through them experience a sudden flash of their latent possibilities, a palpable intuition that they are part of a larger and more perfect whole. The ecovillages of the world have taken the first step in grounding this ideal into reality. We, as students of Ecovillage Design in the 21<sup>st</sup> century, have the opportunity to advance their precedent to the next level by educating ourselves to be proficient designers of human habitation systems, systems that can bring out the very best in human potential. This kind of yoga would be an expression of the “ecology of consciousness” that was introduced as subject matter in this essay. What kind of work could be more, shall we say, regenerative?

Further exploration of this theme could include a review of Bateson’s *Steps to an Ecology of Mind* (1972), seeking to understand the ‘difference that makes a difference’

between an “ecology of consciousness” and an “ecology of mind,” and Goonatilake’s more recent “Knowledge as an Ecology” (2006). Also vitally important would be understanding the effects of ‘wilderness’ – a theoretically undisturbed ecology – on consciousness.

## References:

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E. Christopher Mare has been a full-time student since 1994. He has been given the luxury of self-designed programs in which he gets to organize his own studies. The general progression of interest over the years has been: Permaculture to Ecovillage to Urban Village to Traditional Village to Design for Consciousness. In 2002, Mare founded an educational non-profit – Village Design Institute – which will one day secure a land-base for the purpose of setting up a combination 1) research, training, and demonstration site; 2) Academy of Village Design; and 3) community of contemplative scholars. This project most likely will be called an ‘ecovillage.’