What Exactly *is* a Sustainable Community?

Once the reasons have been understood, or at least accepted, for *why* we need Sustainable Communities, the next step is to begin visualizing what they would look like: What kinds of components in what sorts of spatial relationships constitute the physical structure? Who are the people who will be living in these communities and what will be their social arrangements? What sort of economic base will sustain the community and allow its residents to prosper? How do we account for the diversity of worldviews inherent to any given resident population?

Including all these various perspectives in any given design scenario brings a level of complexity that can be truly astounding. A standard subdivision development can be complex enough; yet there the intention is merely to create 'quality housing' at a fair market price for so many individuals, who are then expected to get in their cars and drive somewhere else to meet all their other needs. In the Sustainable Community, the goal is to provide for all these needs in one place – in one total, complete, self-contained human habitation system. This increased level of complexity requires the transition to and adoption of a *holistic* mindset, where all the components can be perceived not in isolation but rather in their relationship *to the whole* – the whole here being the creation of a community that can thrive far into the future.

In order to make this transition more manageable, it will be helpful to subdivide the whole into four fundamental areas of concern: Ecological, Social, Economic, and Spiritual. In order to answer the question, then, "What exactly *is* a Sustainable Community?" we need to take a look at these four areas in turn, for each has an essential part to play.

Ecological

First of all, sustainable communities are integrated into their local environments in such a way that there is a settlement-ecology symbiosis. This stands in contrast to most typical development, where large tracts of land are first cleared, then overlaid with an abstract pattern that was drawn under the fluorescent lamps of an office somewhere. The approach here is more than just "Low Impact Development," for the objective actually is to foster a long-term *working* relationship between Humanity and Nature – that is the key to sustainability. That is how traditional settlement configurations endured and sustained themselves over time: by nurturing mutually-beneficial, co-evolving relationships with their local ecologies. How could sustainable settlements of the 21st century exist otherwise?

A sustainable community, then, will include natural areas; in fact, it may be more accurate to say that the ideal community is *embedded into* Nature. For this to occur, we need to look over the property lines and see what's happening in the larger bioregion – the goal being to prevent any more piecemeal development and to begin restoring the viability, or ecological integrity, of the region as a whole. When we look after the health of the whole we in turn benefit our own community. Natural areas can extend right into the settlement, as fingers of wilderness connected to a network of protected wildlife corridors. Riparian zones are given special attention, and so restored and enhanced wherever possible. Natural areas are not preserved simply for moral aesthetics, however: with intelligent management for long-term succession, they can provide the community with a steady supply of sustainable timber, fuel, food, and medicine – right there on site.

Artfully situated and sited within this natural setting of topography, hydrology, existing vegetation, soil types, geologic profile, microclimate, etc. comes the built environment. As an ideal, the settlement will have a well-defined center and a well-defined boundary – thus resembling a cellular structure. Within the center are found the market, civic and administrative buildings, a square or plaza, restaurants and night clubs, and some kind of monument that people can identify with the community. The population density is higher towards the center and recedes towards the edge, thus concentrating pedestrian activity in central areas. Four-story limits are observed, never more than five-stories, except for selected towers and belvederes. Residential neighborhoods are clustered with sub-centers of their own, which may include bakeries, cafes, barbers, playgrounds, etc. Along the edges between neighborhoods are promenades lined with shops, workshops, offices, and other employment opportunities. Light industry appropriate to the needs of the region is located somewhere *within* the community, with profits managed and disbursed *by* the community. Arterial streets extend outward from selected points in the settlement to other sustainable communities, some of which might be immediately adjacent. Parks and green space abound, and, significantly, there is no square grid.

As another aspect of the Ecological dimension, sustainable communities will enjoy energy independence. This means, first of all, eliminating debilitating *de*pendence on highly unsustainable fossil fuels just as quickly as possible. No matter where on Earth the community may be, there are renewable energy alternatives. Wind and solar are preferred, however hydro, geothermal, biomass, and tidal are also possibilities, depending on the location. According to some writers, hydrogen has a promising future at the local community level; however, as a storage technology, the hydrogen system still will need other sources to generate the energy in the first place. As oil becomes

increasingly scarce, efforts should be made to resist at all costs its replacement by another highly centralized energy regime – especially nuclear.

Because the sustainable community is a compact, close-knit, pedestrian-oriented, inherently "Mixed-Use" development, the amount of energy required to fuel the community is drastically reduced. As a general rule, automobiles are restricted to the perimeter. When residents can safely walk, ride a bike, scooter, rollerblade, or take an electric trolley to get wherever they need to go, then spontaneous social interaction is encouraged and the people's health is improved markedly. Many residents will discover that their cars are just cumbersome, expensive energy drains that they don't need anymore.

A sustainable community is, by definition, a *self-reliant* community. This means that measures will be taken to ensure food security. The edible landscaping of fruit and nut trees, as well as berries, can be interwoven throughout the pedestrian corridors. Neighborhood residential clusters can have 'community gardens' of their own, which can supply most of the residents' produce needs. Staples like grains, potatoes, beans and corn can be grown toward the edge of the community. Animals can be selectively introduced to provide eggs, milk, cheese, meat, manures and muscle power. This animal protein will be so much healthier when cared for and processed within the community, by friends and neighbors, rather than received and packaged from inhumane industrial sources like today.

Obviously, a sustainable, self-reliant community also will need to have some control over its water supply – so this is a good reason for paying attention to and participating in the politics of the watershed. Within the settlement pattern, water should be captured and stored wherever and whenever possible. This begins with the knowledgeable placement of dams, ponds, and swales in the landscape as water storage systems. Recharging the aquifer below the settlement is always a top priority, so that the flow from wells can remain consistent. Rainwater runoff from roofs, patios, pavement, etc. can be directed into the surface storage systems or channeled into ferrocement cisterns. Water stored higher in the landscape becomes a potential energy source for applications below. Along with its purely functional uses, designers should never forget the calming and contemplative psychological appeal that water has to offer; therefore, in the hydrologic flow within the community, always include plenty of pools, streams, and fountains, along with many access points and minimal bridges, so that everybody can enjoy the water.

Another use for water is in the treatment of waste. Constructed wetlands can be engineered to purify 'blackwater' through the uptake by certain plants, which can then be composted. 'Living machines' recreate the same dynamics in a greenhouse environment. In both cases, solids are first digested by macro-fauna, such as snails and

tilapia, and then effluent is digested and transformed into clean, usable water by a host of microorganisms. Some day we will look back and realize how wasteful it was to drop feces into perfectly good drinking water, transport the mixture to a high cost, chemical treatment plant, and then dump the result into the ocean. In an environment lacking abundant water, composting toilets are an effective 'dry' means of transforming human waste into nutrients that can be used by plants, especially in agroforestry systems. Greywater is the name given to the drain-off from sinks, showers, washing machines, etc. Since this water is more nutrified than tap water, it is often desirable to channel this drainage into plant systems, thus increasing yield.

A sustainable community also will want to manage its solid waste cycle, keeping recyclables within the system and choosing not to utilize materials that can't be reused. They say pollution is just an unused resource. It's really all about becoming conscious of embodied energy investments and making the most use of that energy at each stage of its degradation toward entropy. An example of refined energy consciousness that uses what was once 'waste' is 'co-generation,' where the heat radiating out from an industrial process is captured and then used to heat homes instead of randomly dispersing through the air.

Truly, the design and development of sustainable communities requires so much more thought, ingenuity, education and creativity than the development of standard subdivisions. This is so, in part, because each sustainable community is unique – this practice is very site-specific, using the flora and fauna, energy flows, land forms, historic precedent, social and ecological capital, etc. of this one particular place, this one special spot on Earth. What's more, the design evolves over time – it is never quite finished but rather subtly refines and adjusts itself in response to the needs of its users. Ultimately, however, a sustainable community can never be just a 'place;' instead, it is more like a people-place-nature interface, where a group of humans creates their own unique culture, over time, attuned to the rhythms of Nature at that locale.

For these reasons, it is not enough merely to pay attention to the Ecological aspects of a Sustainable Community Design, as seems so often to happen. To be comprehensive, to be truly effective, we must also look at the Social dimension.

Social

The typical American suburban subdivision is, in many ways, like a dormitory: the residents return to their homes to retire in the evening while their business, recreational, and social activities are generally conducted somewhere else. Houses are placed in the center of lots in a fortified-like position, while frontages are often the uninviting blank stare of two-car garage doors. Residents returning home approach their driveways, press their remote control garage door openers, and then disappear inside to

– who knows what – watch TV? Enormous resources are spent maintaining a carpet-like lawn, yet nobody ever uses it. Similarly, some models of houses may have porch-like entrances, yet you never see anybody sitting outside enjoying them. In these suburban subdivisions, neighbors may never get to know one another; and on second thought, they may never *want* to know one another – a superficial "hello" is enough, thank you. This impersonality is because suburban houses are foremost 'real estate investments' – nobody's actually planning to put down roots there. Neighbors may not have anything in common anyway, other than being able to afford comparable mortgages. Everything about this settlement pattern speaks of isolation and alienation, yet subdivisions are often called 'communities.'

Townhouses, condominiums, and apartments may be a little better, in that neighbors of like-mind may be found within walking distance; yet even these people are compelled to drive in their fossil-fueled automobiles everywhere else to meet their needs. The inclusion of clubhouses, recreation rooms, and other shared amenities is a big step toward integrated community; yet, without a common sense of purpose – a 'common-unity' – these people are merely sharing space, not actively working toward a shared destiny, which is the basis of real communities.

Real communities can be found throughout the Old World – Europe, Africa, Asia, Oceania, and down through Latin America. In these cultures, there is so much community that there are networks of communities overlapping one another – any given individual may belong to multiple communities at once! What makes the situation so different in the rest of the world? They are, after all, the same species of humanity. The point of distinction is nothing less than the contrasting patterns of settlement: Living arrangements that grew up organically, over an extended period of time, with 'quality of life' as a principal goal, have community built right into them; living arrangements that were thrown together rapidly, in a mad rush of development, where quantifiable economic efficiency was the top priority, are devoid of community. It's as simple as that.

Community building doesn't need to be a big production – after all, human beings are by nature social animals; yet, if the opportunities do not exist for casual, spontaneous, unforced and unstaged social interaction, then this human need will become distorted. The next thing you know, there will be "internet salons," "computer dating services," "virtual communities," and all manner of superficial and unsatisfying social substitutions – including vicariously living out social dramas via soap operas, sitcoms, and movies. Some people may simply choose to passively withdraw. Imagine this trajectory continuing over the course of generations… Could the result not be anything less than societal breakdown? This situation is not at all sustainable.

"Sustainable community" doesn't necessarily mean that everybody will gather together in a circle holding hands and singing Kumbaya; nor does it necessarily mean endless meetings attempting to work out consensus decision making – the general population is probably far too socially inept and dysfunctional for these practices. Yet, if the society is to endure, if it is to be able to have some degree of continuing into the indefinite future, then its members *will* need to develop some interpersonal social skills. The first and most basic step in the solution has already been mentioned: the built environment must be constructed in such a way that casual, spontaneous, unforced and unstaged social interaction becomes possible. Look to the Old World for the patterns that work. Since construction in North America is overwhelmingly developer-led, then these developers have a responsibility to educate themselves in the creation of genuine sustainable communities – holistic living arrangements wherein the human need for a meaningful, satisfying social life may be fulfilled. In this case, relying on 'market mechanisms' will not suffice – some personal initiative is called for.

Economic

In order to get a grasp on the Economics of Sustainable Community Development, one must first understand the deeper meaning of this word 'economics' – for we are not speaking here solely about 'finance.' Economics has as its root the prefix 'eco,' which means 'home.' *Eco – nomos* originally referred to *the management of the home* – home being here not just a house but rather the larger encompassing eco-system from which a group derived their living. 'Economics' has as a close cousin the word 'ecology.' *Eco – logos* refers to the *study* of the home, or greater eco-system. According to this logic of etymology, then, 'economics' is rightly a subset of 'ecology,' since one must first *study* the home, and come to recognize all its essential interdependent relationships, before one can effectively *manage* the home, and so derive a prosperous living.

Unfortunately, over time the word 'economics' has been bastardized by the theoretical, elite-serving disciplines of 'macro-economics' and 'political economy' to refer primarily to the way in which nation-states and transnational corporations compete strategically over access to markets and resources. (*Global* economy anyone?) In common usage, economics has come to be equated with money, so that a person's financial situation or income potential is determined to be their economic condition. (Isn't it true that when you hear the word 'economics,' you automatically think about 'money'?) These are, however, extremely shallow and abstracted derivations from the formerly grounded, nature-based, people-serving meanings of a true eco-nomics, and stark reflections of the extent to which *Homo economicus* has become divorced from the land and the common person separated from the tools of production.

So we see that *all* economics was originally 'sustainable community economics,' since managing the local environment to produce a living was always organized and accomplished at the scale of the community – not at the scales of the individual, nation-state, or corporation. Sustainable communities of the 21st century, then, in order to ensure their survivability over time, will want to return the responsibility for their livelihoods to this human scale of community.

What does all this mean from a design and development perspective?

First, economic sustainability begins with the security of tenure of a land base. Don't let anybody fool you – *real* wealth always originates from a land base. This land base needs to be secured *at the scale of the community* – certainly not at the scale of the individual plot (and please keep the transnational corporations far away; for these are amorphous, shifting, predatory entities with absolutely no long-term commitment to the health or survivability of communities). Private ownership of individual dwellings can still be maintained, but the land base as a whole needs to be managed by a *community* corporation, whose purpose is to ensure that the land base remains cohesive and viable into perpetuity.

Researchers continually emphasize population numbers of 500 and 5000 as the optimum sizes for this self-reliant community. In an ideal situation, a village of 5000 will be sub-organized into 500 person socio-economic sub-units. Five-thousand is considered the minimum population necessary to embody the diversity of goods and service specialties that will enable a group to meet all their essential needs internally. This is the mark of self-reliance – not at all dependent on an external economy to meet *essential needs.* Five-hundred is considered an optimum number for a group to maintain a sense of cohesive social identity and solidarity, such that all members can be known, or at least recognized; thus there are no 'strangers.'

Once a community corporation has secured a land base, steps should be taken immediately to enhance the health and productivity of the land. This is the beginning of the creation of real wealth. There are many techniques to accomplish this, and many of these were introduced in the Ecological section. Permaculture is an important concept here. Also vitally important is recognizing that at the community scale, especially with numbers approaching 5000, a land base the size of a whole ecosystem can be managed and maintained.

The managed ecosystem can then be evaluated for its potential products and services. The 'primary production' of forestry and agroforestry needs to be maintained for long-term ecological succession. The richest, loamiest soils need to be reserved for agriculture and horticulture. Additionally, aquaculture can be included in most environments. Orchards can be interwoven throughout the greater settlement-

ecosystem complex. Thoughtful, knowledgeable, well-designed and integrated systems are the most productive and resilient.

The bountiful produce from the land becomes the economic base for the community. That which is not consumed directly can be converted into value-added products. For example, a sustainable timber harvest from community managed forests can provide livelihoods for the furniture maker, the cabinet maker, and the maker of musical instruments. As another example, a community managed dairy herd, grazing on rotational fields, will provide the milk that can be converted into cheese, yogurt, and butter. Surplus can be traded with neighboring communities. A comparative advantage, such as berries in the Pacific Northwest, can be developed into an export crop for cash – this cash being at the moment Federal Reserve notes but perhaps in the future some kind of regional currency.

An inventory should be made of the intellectual capital in the community, then compared against the economic needs of the region. From this analysis will be revealed an industrial niche that can be filled by the community. No matter what this industrial niche might turn out to be, the point is that light industry, even high-tech light industry, is consonant with a sustainable community economics. As with the land base, however, the tools of production of the industrial base are owned by the community at large, managed by community corporations, and run by community cooperatives.

This structural organization is different than 'communism' – where the tools of production are owned by the State, and also very different from 'capitalism' – where the tools of production are owned by privileged individuals. It could be argued that both of these 'industrial age' social-economic innovations are now outdated, no longer viable, and so not the least bit sustainable. The post-industrial, post-modern, post- Oil Age context requires rethinking the role of economics in people's lives – for we are coming out of a short-term blip in the human drama. The perennial background (what came before and what is to come) has always highlighted a nature-centered, community-based system, where eco-nomics is rightly a subset of eco-logy. This is the path toward sustainable prosperity: preserving and enhancing whenever and wherever possible natural capital, social capital, intellectual capital, *as well as* financial capital.

Spiritual

The United Nations recognizes three pillars to Sustainable Development: Social, Economic, and Environmental. The Global Ecovillage Network recently produced a curriculum that added a fourth – Spiritual (subtly disguised by the label Worldview). UNITAR has endorsed this curriculum, so there is agreement in principle, yet no one at the agency is openly espousing spiritual viewpoints.

This is a most sensitive issue: the subject of spirituality touches people's deepest aspirations and fears, their most profound feelings, intuitions, and beliefs; it offers the most sublime of explanations regarding the meaning and purpose of Life, and what may lie beyond. No wonder designers, developers, planners, architects, educators – just about everybody – tend to avoid this issue: there is too much at stake; someone may get offended!

Yet, when you really stop and think about it, spirituality is at the very heart of the purpose for sustainable community, and how could it be otherwise? At the level of integration that Spirituality evokes: a group inculcates a moral code as a standard of conduct; it agrees upon a set of ethics from which to model behavior and judge the dealings between people (and between people and Nature); it issues normative values as guides to its loftiest ideals. This is the glue, the substance of the community that holds it all together. By ignoring this vital aspect in a design and development scenario, the outcome is bound to be lifeless, stale, lacking vigor, a mere shell, a mechanical production prone to entropy.

It's important to make this distinction: spirituality is *not* religion – although religion includes spirituality; but religion is also dogmatic, coercive, and punitive. Religion incorporates an elite priestly class as the moderators between the Highest Ideal and the wretched humans below. Religion uses a set of sacred scriptures, divinely revealed by avatars ages ago, as the basis of its teachings. Religion certainly has an important role to play in the world, and becomes the refuge for many, but it is not what we have in mind when using the term 'spirituality.'

Spirituality is the direct, personal experience of something far greater and vaster than ourselves, something perceived to be a divine inspiration or emanation arising from the source of life or creation. This direct experience of the numinous compels us to deepen and expand our previous boundaries of what constitutes 'the possible.' This kind of spirituality is dynamic, open-ended, and accessible by anyone. Perhaps we've all caught a glimpse or a vision of a humanity that is far nobler and more dignified than its current state. Perhaps we've all felt in ourselves the stirring for perfection, the desire to reach upward to a fuller, more complete, more satisfying state of being or awareness. This is a spirituality that strives to realize or actualize what could be the very best in human potential.

And what exactly does all this mean for the design and development of sustainable communities?

Well, of course, the community is the vessel or receptacle through which this transformation can take place. Insinuated here is that the transformation will be more challenging, less supported, in generic conditions outside of community. The sustainable community is the well-conceived, multi-dimensional, holistic context that can bring out

the very best in human nature – that is one of its defining characteristics. With sustainable communities as their home, human beings have the opportunity to grow and evolve into their highest potentials.

From an Ecological perspective, design criteria include: using feng shui, vastu, geomancy, and sacred geometry in the layout of the community and in the positioning of key nodes or focal points; setting aside acreage for undisturbed Nature; providing meditation spots throughout the settlement pattern, including meditation halls or sanctuaries for groups; integrating sacred or spiritual symbols and motifs into the architecture; adorning the built environment with colorful artwork, murals, statues, etc., hopefully produced right in the community; providing access to clear, still pools of water where fish may be swimming; placing an obelisk or venerable tree in the spiritual center of the community; constructing buildings according to the proportions of the Golden Mean; placing reminders to 'pay attention,' such as bells or wind chimes, throughout the community; etc. This list of design criteria could be quite extensive. For further ideas, I would suggest consulting one of the many fine books devoted to Sacred Architecture.

From a Social perspective, design criteria may include: providing multiple temple spaces for diverse groups of practitioners; openly encouraging an atmosphere of acceptance for diverse points of view within the community; empowering individuals with a sense of self-direction by instituting transparency in a participative level of local government; establishing a culture of celebration by observing a festival and ceremony calendar; using an 'intimacy gradient' to create public spaces for celebration as well as private courtyards for quiet reflection; instituting free health care within the community; instituting free education within the community; developing the skills of conflict resolution, non-violent communication, and consensus decision-making among the populace; and implementing other socio-spiritual methods for promoting and bringing out the very best in human nature.

From an Economic perspective, design criteria may include: establishing a consortium of cooperatives and collectives, whereby income differentials among workers never exceeds 5 to 1; insisting on a culture of 'right livelihood,' whereby professional activities that exploit people or Nature are banished or reformed; ensuring that every individual has the most basic necessities of food, shelter, clothing, and water; economic health is judged in regard to the community as a whole, including its land base, and not by the status of any selected individuals; transnational corporations and other predatory entities are excluded from the economic life of the community; surplus wealth is reinvested back into the community, not into the global casino; an internal currency is created for the exchange of goods and services within the community; and

then accommodating other economic-spiritual practices for ensuring the long-term health and vitality of the whole as a priority before enriching any of its parts.

All spiritual, and even religious traditions, promote notions like goodness, respect, and purity of purpose, and elevate the qualities of Love, Compassion, Truth, Beauty, and Forgiveness. These are the qualities that bring out the very best in human nature, and facilitate the striving toward growth in human potential. These are the qualities that need to be the foundation of any sustainable social order. Let us, then, walk our talk, and not just mention these spiritual goals in passing, while simultaneously acting out in the world in contrary ways, or in ways that inhibit their manifestation. Let us begin now advancing planetary evolution by building genuine Sustainable Communities – holistically-conceived, nature-encoded living arrangements wherein the spiritual potential of a unified Humanity and Nature can unfold in all its splendor. And, while we're at it, let's embody these timeless qualities of Love, Compassion, Truth, Beauty, and Forgiveness in our own lives, thus energizing us on this amazing journey