

THE URBAN VILLAGE

Synergy of Ecology and Urbanism



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Introduction

The term “Urban Village” is currently being used by developers, governments, and the planning profession to describe a new patterning of human settlement. This paper will review the manner in which the concept “Urban Village” is being employed, will come to suggest that developers, governments, and planners are moving in the right direction but are not going far enough, and will finally propose the characteristics and qualities of a version of “Urban Village” that is a genuine synergy of ecology and urbanism.

The whole discussion will be framed within the concerns of an increasingly relevant issue of our times – the goals of long-term “sustainability” – and will pay particular attention to the prospects and challenges of a “reduced-carbon” future in conditions of “energy descent.” The synergistic “Urban Village” will be proposed as a comprehensive retrofit solution for this anticipated scenario.

In order to ground some of the more theoretical ideas that will be presented, particular case studies will be analyzed for reference.

The paper itself, its format and content, will be an example of the use of “Ekistics” – the scientific, multi-disciplinary study of human settlements. As such, “Urban Village” will be explored from the interdependent, interpenetrating perspectives of diverse fields, including: human geography, human ecology, urban planning, sociology, psychology, economics, energetics, cultural anthropology, topology, architecture, evolutionary biology, and the meaning of ‘place,’ etc.

I am writing from the West Coast of the North American continent in the bioregion of Cascadia in the opening decade of the 21st century, and this vantage point greatly influences my perspectives and my personal experience with the

unfortunate consequences of careless, haphazard, uninformed settlement design and planning. From this vantage point, I can see a tremendous need for the full and open development of the concept “Urban Village.”



This work is dedicated to my dear brother Matthew, who, upon witnessing the deliberately provocative documentary “The End of Suburbia,” from his beautiful, comfortable, California suburban home, entreated in his usual compassionate manner: “But what about the human dimension – people adapting and finding solutions to their own problems?”

What is a Village?

Before jumping right into this new theme of “Urban Village,” it will be informative to step back a bit and appreciate the phenomena of “village” more generally, for apparently the adjective “urban” is referring to a certain *kind* of “village.” In *A Geography of Settlements*, F. S. Hudson declares:

“[T]here is no clear-cut distinction between a hamlet and a village nor between a village and a town. It is generally assumed that a hamlet is smaller and less compact than a village and that it lacks some of its amenities, just as a village in turn is less built up than a town and is without some of the facilities that a town provides” (p. 35).

To the practicing Human Geographer, then, there is a *typology* of settlements, a classification system based on size, scope, and function. Hudson’s typology extends to include *cities*, which are larger than towns, *metropolises*, which are agglomerations of individual cities, and *megalopolises* – vast stretches of the urbanized environment.¹ Sustainable community design groups in Australia have identified settlements even smaller than hamlets as *enclaves* – mere collections of multiple dwellings with their accessory and ancillary units.²

While there may not be “clear-cut distinction,” and in some cases there will certainly be overlapping, the reasons for a classification system are not purely academic, for there are distinctive functional qualities associated with the various types – economies and sociologies of scale. A village, for example, has greater production capacity than a hamlet, meaning a greater diversity of goods and services can be produced entirely within that system. Similarly, it takes megalopolis-scale development to produce a human artifact as complex as, say, a

¹ Doxiadis (1968), the originator of the term Ekistics, envisioned a further type of settlement – the *ecumenopolis* – that would be a continent-wide blanket of megalopolises. Such a vast expanse of human construction is not even possible, given ecological constraints, but it completes the theoretical typology.

² The term “enclave” seems to have come into general use with ecovillage groups in northern New South Wales, particularly Nimbin Eco-Village Pty. Ltd. (see www.earthwise.org.au/village).

satellite mapping system. Varying types of settlement patterning elicit varying respective design criteria, and this is fundamental to a systems perspective.

Functional qualities also include potential cultural amenities. Max Lindegger, of Crystal Waters, is fond of saying, "A village is large enough to contain a church; hamlets are too small for churches."³ This seemingly straightforward statement alludes to the nuanced complexity underlying cultural distinctions among settlement types. How inclusive does a settlement need to be before it can support an opera house or symphony? Could these same functions be consummated within a clustered amalgamation of smaller-scale settlements?

Significantly, Hudson goes on to add:

"A village is more closely related to its immediate surroundings than a town and it more completely typifies the kind of region in which neither manufacturing industry nor commerce are highly significant. In most villages, the majority of the workers are occupied in farming, but it is generally agreed that besides agricultural villages there also exist forest villages, mining and quarrying villages, fishing villages, [etc.]" (*ibid*).

A picture is developing here of each "village" serving some sort of 'primary production capacity' within the encompassing regional society - this capacity usually based on agriculture, or at least complemented with an agricultural component. In this picture, larger regional commerce centers are "towns," and greater regional commerce and industrial centers are "cities" - although, in the high-tech 21st century, it is certainly conceivable to imagine commerce and even light industry occurring at the human-scale of the "village."

The characteristic of the village being "closely related to its immediate surroundings" is found universally.⁴ So pervasive is this sense of blending into

³ For an overview of Lindegger's pioneering work in sustainable community design and implementation, including the UN Habitat award winning Crystal Waters, and post-tsunami recovery work in Sri Lanka, see www.ecologicalsolutions.com.au

⁴ See for example: Srinivas (1976), Ransel (1993), Wylie (1957), Brandt (1971), Chance (1984), Boissevain (1980), Fakhouri (1972), Dentan (1968), Beals (1974), Downs (1980), Redfield and Rojas (1934), Fromm and Maccoby (1970), Blythe (1969), Dube (1967), Yang (1945), or, for that matter, anywhere in the cultural anthropology literature.

the landscape that it is definitive: *villages are symbiotically integrated into their supporting local ecologies*. (Elsewhere I have called them “anthropomorphic outgrowths” of a particular ecology (Mare, 2000a)). This is because villages, at least the traditional variety, grew to maturity in place *organically* over countless generations; that’s what makes them so sustainable – this symbiotic, mutually-beneficial and mutually-defining interconnectedness with their environments.⁵

In an influential book entitled categorically *Villages*, the result of many years of field research, author Richard Critchfield exclaims unequivocally: “villages endure,” and adorns our current discussion with:

“Most villagers have a love of their native land, a desire to own land, an intense attachment to their ancestral soil, a personal bond to the land, a reverence for nature and toward habitat and ancestral ways; there can be an almost organic relationship between a man and a woman, their labor and the land” (p. 342).

In the same section as this passage, other, more socio-cultural characteristics of village life are cited, including: “[T]he family is of central importance and blood ties and kinship have heavy weight;” “[A]ge is respected, tradition and custom binding;” “[T]here is a tacit recognition that while a villager is rustic, he or she has a superior moral code to people in the cities;” “All villagers tend to be skeptical toward organized religion...and toward its priests;” “[V]illagers have little sense of nationalism, but tend to identify themselves with a local region or ethnic group; there is a fear of big cities...the village remains the fixed point by which a man or woman knows his or her position in the world and relationship with all humanity;”⁶ “[F]ear of neighbors’ censure is a much more potent force in holding a village together than government fiat or fear of God;” “[N]eighboring

⁵ As a testimony to their sustainability, consider this passage from Hudson: “Once established, a village may occupy the same site for hundreds, even thousands, of years. In the Nile valley, for example, most Egyptian villages, including some probably 6,000 years old, stand on low eminences artificially raised above the flood-level by the superimposed layers of old buildings and their rubbish dumps. Many villages in China are undoubtedly 4,000 years old. In southern Italy there has been continuous village occupation since the Bronze Age, in southern France since the days of the Romans and in England at least from Anglo-Saxon and Scandinavian times” (p.38).

⁶ While studying with an agronomist in rural France, I was informed: “The people around here tend to identify with their village more so than with the nation.”

villages invariably have bad reputations;" "[T]here is some degree of mutual cooperation; it is understood that each villager has a part to play in an organic whole;" "[T]here is little or no difference in the outward aspect of the houses and clothing of the rich and poor" (pp. 341-45).

This last characteristic of the perennial village really strikes me: As a North American of northern European descent, with comparatively shallow roots, I can only imagine being part of such a deep, organic, eco-social whole - an interdependent collectivity so unified in purpose and identity - that the wealthy choose a modest and egalitarian parity over ostentation. Is this same sort of parity, or at least an attempt at income diversity, a characteristic of the 21st century "Urban Village?" If not, could these novelties really be considered authentic "villages?" Accountability naturally arises when people must meet each other face to face on a daily basis in a human-scale context, and when production and distribution networks are clearly visible.

Critchfield often repeats the message that all villages share something of a common culture, and closes his book with the proposition:

"History suggests that there may be no adequate substitute for this universal village culture...It just could be the most harmonious way of life for human beings who choose to live in groups" (p. 346).

The Village Design Institute (www.villagedesign.org) notes some additional defining characteristics of villages:

- They tend to be compact, with well-defined boundaries and well-defined centers, these centers usually being some sort of village green, square, or plaza, often with a tree, obelisk, fountain, or statue - something symbolically meaningful to the history of the village - as a focal point. These centers invariably contain a marketplace, the economic hub of the village, usually lined with administrative buildings;
- They tend to be small enough so that everyone can be recognized - there are no strangers - yet large enough so that all essential economic functions

- the necessities of life - can be produced or serviced entirely within that habitation system; this makes them very self-reliant in a way the “hamlet” could never be, with a strong sense of collective identity and purpose that starts to disperse at “town” scale;
- Villages tend to maintain their population levels, in a self-organizing way, within the ecological carrying capacity of their encompassing environs - and there are social taboos to compel this;
- Villages, as self-contained organic unities, are capable of enforcing their own laws internally, without the need of a state-sponsored police force; and these laws are consistently derivative of natural laws.⁷
- Individual villages tend to have something distinctive about them - either in custom, speech, or dress - so that when traveling about the region, one’s village of origin can be instantly recognized by others;
- Actual population for a village, taking into account all the above factors, will not exceed 5000 persons; settlements larger than this move into “town” scale. At the lower end of the spectrum, a population of 500 persons is the bare minimum for achieving the social, economic, and cultural potentials of the village; settlements smaller than this move into “hamlet” scale.⁸

⁷ One day, while sitting in the market plaza of a large village in the Highlands of Guatemala (San Pedro la Laguna) and learning the local Tzutujil dialect from some youngsters, we were suddenly alerted to a commotion in the crowd at one corner of the plaza. As everybody strained to see what was happening, through the crowd emerged four men carrying a fifth face down. A pair of ‘num-chucks’ was wrapped around each arm and leg of the face-down man. When they got to the administrative building near to where we were sitting, they unwound the num-chucks and threw the man into a brig in the basement. There, clearly visible behind bars at the bottom of some steps, he began to moan and groan. It turns out this man had gotten intoxicated and started some trouble. The four men with num-chucks were vigilantes. The intoxicated man was to learn his lesson with three days of only water in public humiliation. San Pedro la Laguna, because of its relative isolation at the far end of a lake backed by a mountain range, has no state Guatemalan police force; nor has it the need of one. I doubt this intoxicated man will repeat the error of his ways: next step would be *banishment*.

⁸ For a well-researched, multidisciplinary defense of this 5000 optimum number see *Human Scale* by Kirkpatrick Sale. Then, representing the influential Chicago School of Urban Ecology, E. W. Burgess writes in *The City* way back in 1925: “The human community tends to develop in cyclic fashion. Under a given state of natural resources and in a given condition of the arts the community tends to increase in size and structure until it reaches the point of population adjustment to the economic base. In an agricultural community...the point of maximum population seldom exceeds 5000. The point of maximum development

In a very insightful section of the *Sustainable Communities* book, Sim Van der Ryn, before introducing a project called “Marin Solar Village,” speaks knowledgeably about ‘village’:

“[P]erhaps the village represents an organic vision of community, because the central theme of village is that of a community directly tied to the productivity of the land. The size of a village is usually defined by how far one can walk to outlying fields. *The village is an organism* that literally builds itself and feeds itself and today would also grow or collect its own fuel and energy. In the village, everyone is both a producer and a consumer of goods and services to be sold, exchanged, or given freely. The composition of the village includes all age groups living together, not segregated spatially or by institutions. A village might have from a few hundred to a few thousand people. At the latter size, the village’s core is its trading center and stores, also containing the centers of local governance, communication, education and religion, the town square or commons, and places to gather together – in other words, it contains coherence, stability, continuity, *sustainability*” (1986, p. 57, emphasis added).

All the above characteristics from the past several pages could be considered universal and definitive; that is, they are manifest no matter where and in what time the village – as a primordial social-spatial unit – may appear. Particularly, this idea of the village as an ‘organism’ is worth exploring further.

Lewis Mumford was a prolific writer and scholar who wrote in the transdisciplinary manner being practiced here; thus, his *The City in History* was inherently an ekistic investigation. In this magnum opus, Mumford places “the village” within the context of an historical evolution, and notes:

“The village, in the midst of garden plots and fields, formed a new kind of settlement: a permanent association of families and neighbors, of birds and animals, of houses and storage pits and

may be termed the point of culmination or climax, to use the term of the plant ecologist. The community tends to remain in this condition of balance between population and resources until some new element enters to disturb the *status quo*, such as the introduction of a new system of communication, a new type of industry, or a different form of utilization of the existing economic base.” Interestingly, Plato in *The Republic* in the fifth century B.C. “called for the division of the city into 5040 lots, each housing a citizen – the maximum number Plato felt could participate in face-to-face governance in the public amphitheatre [agoraj]” (Appelbaum, 1978, p. 1).

barns, all rooted in the ancestral soil, in which each generation formed the compost for the next. The daily round was centered in food and sex: the sustenance and the reproduction of life" (p. 13).

Of course he is talking here about the transition to sedentary lifestyles that occurred in the Neolithic period, a period exalted by ecofeminist scholars such as Riane Eisler (*The Chalice and the Blade*) as being the embodiment of the *matriarchy* – a society based on the values of woman- and mother-hood. Mumford goes on to provide quite an eloquent description of the incipient relationship between village and matriarchy:

"Certainly 'home and mother' are written over every phase of neolithic agriculture, and not least over the new village centers, at least identifiable in the foundations of houses and in graves. It was woman who wielded the digging stick or the hoe: she who tended the garden crops and accomplished those masterpieces of selection and cross-fertilization which turned raw wild species into the prolific and richly nutritious domestic varieties: it was woman who made the first containers, weaving baskets and coiling the first clay pots. In form, the village too is her creation: for whatever else the village might be, it was a collective nest for the care and nurturance of the young. Here she lengthened the period of child-care and playful irresponsibility, on which so much of man's higher development depends. Stable village life had an advantage over looser itinerant forms of association in smaller groups in that *it provided the maximum facilities for fecundity, nutrition, and protection...*Woman's presence made itself felt in every part of the village: not least in its physical structures, with their protective enclosures, whose further symbolic meanings psychoanalysis has now tardily brought to light. Security, receptivity, enclosure, nurture – these functions belong to woman; and they take structural expression in every part of the village, in the house and the oven, the byre and the bin, the cistern, the storage pit, the granary, and from there pass on to the city, in the wall and the moat, and all inner spaces, from the atrium to the cloister. House and village...are woman writ large" (pp. 12-13, emphasis added).

At this stage it is enough to assert that the "village" coincides with the matriarchy while the "city" is an instrument of the patriarchy. Will 21st century "Urban Villages" provide context for "the maximum facilities for fecundity,

nutrition, and protection?" This remains to be seen. If they don't, could they be considered *real* villages?

I am reminded of the times I have flown over Europe and looked down to see genuine villages scattered over the landscape - their rounded, softly crenellated forms resembling biological structures: neurons or protozoa - their well-defined though permeable 'cellular membranes' being the unencroachable boundaries between house and field. How long has that village assumed the relatively same morphology, neatly conforming to and enhancing its topography, aligned to accept and store the nutrient flows coming down its watershed? It looks like it's embedded right into the landscape as if it had grown into place there from a sprouting seed. For how many generations have the families down there lived on and tilled that one same fertile spot of earth, co-evolving with the flora and fauna and unseen living energies of that one particular special place they call 'home?'



Traditional French Village (Normandy) blended into the landscape, the morphology of millennia.

Photo by EC Mare, 1998

For those who have undertaken the study, the word “village” invokes a very exacting set of responses. The “village” is a very discrete evolutionary phenomenon: it has a certain size and form, a certain function, certain qualities and characteristics that are inherent no matter where in the world or at what time the village may appear.

What then are we to make of this new concept “Urban Village,” for on first glance it appears to be a contradiction in terms: “village” has always been placed in a nature-encoded, pastoral context while “urban” is usually reserved for those artifized, dense concentrations of city cores?⁹ Can these two very distinct – even contradictory – psycho-topo-socio-economic cultural settlement patterns intermingle, converge, and synergize in one place? Are we to expect some sort of hybrid?

Cause for concern will be revealed in the next section...

⁹ From an Urban Geography textbook (Northam, 1975, pp. 6-7) we read: “The sociologist, Nels Anderson, implies that urban or urbanism is a way of life of [humanity] or the condition of [humanity] characterized by certain attitudes, such as transiency, superficiality, and anonymity...Most geographers would accept a definition of “urban” that would essentially state that urban is a locational setting in which (1) the density of settlement is considerably higher than that of the general population, (2) the people in that setting mainly are engaged in nonagricultural activities, not in economic activities normally placed in the primary economic sector, and (3) the locational setting serves as a cultural, administrative, and economic center for a region peripheral to the center in question.”

The 21st Century American Village: Marketing for a Corporate Monoculture

Here in my home town of Bellingham, in the bioregion of Cascadia, on the North American continent, we have many disingenuous developments that call themselves “villages.” They seem to be packaged in two major varieties: some are merely *shopping centers*, as in:

- “Sehome Village” – a fairly large complex containing a regional chain grocery store, a national chain drug store, and a popular regional sporting goods store situated alongside many smaller specialty stores, all encircling a drive-up corporate Starbucks sitting in the center of what must be 6 acres of parking lot. The corporate owners of this ‘shopping center’ recently went through the expense of constructing Wild West facades on the storefronts, complete with pseudo-windows, for the purpose, I suppose, of making it look more like a ‘village;’ or:
- “Barkley Village” – a shopping complex with a similar layout overwhelmingly dominated by parking for the car, and ironically containing the same grocery chain as an anchor; although to their credit, and oddly hidden from view, in this complex an effort was made to create what they call a “Main Street” pedestrian corridor, which you can only get to by car, and which, like “Main Street” Disneyland, is only occupied during business hours.

The other major variety of “village” around this small city is nothing more than an *apartment complex*, as in:

- “Viking Village” – two stories painted in grey containing perhaps 20 units – an L-shaped structure lining a parking lot, or:
- “Varsity Village” – a fairly spacious agglomeration of about two dozen quad-plexes subsidized for low income.

Of course, none of these examples has even a remote semblance to an actual, authentic, full-featured *village*, whose qualities and characteristics were reviewed in the previous section, but the word *feels* good and apparently attracts customers and tenants.

The most recent, and perhaps most starkly deceptive, example of an ersatz village to invade our small city is nothing more than a corporate retail enclave surrounded by blacktop. From the adjacent busy arterial is clearly visible a large welcoming sign announcing "The Village on Samish." Here the anchor is a weird hybrid of a Mobil gas station/mini-mart conjoined in the same building with a McDonald's Playland fast-food restaurant. (This is one-stop shopping where you can get your intestinal gas and your automobile gas at the same location!) Completing this corporate enclave is a Pizza Hut, a Quizno's Subs, a generic check-cashing rip-off called "Advance America," and an indoor tanning salon - that's it. Where's the village? Where's the primary production? Where's the strong collective social identity? Where's the central plaza?



Photo by EC Mare, 2005

There are also many business names around here, widely scattered, bearing the same warm, homey title: "Village Books," "Village Lighting," "Village Inn," "Village Veterinary" (one of the stores within Sehome Village), "Village Pub," and the recently departed "Village School." It seems that everybody wants to be a part of the "village" while only a few are inquiring into what that actually means.

This phony village phenomenon is not only happening here in Bellingham: On a recent trip through the San Diego area I discovered the standardized California version of the so-called "village": the planned residential *subdivision*. While driving around with my brother one day, I noticed one of these subdivisions called, naively, "The Villages," and another, more fancy one, called "Scripps Ranch Village." In a newly developed section of the area spreading unsustainably way out into the desert I saw a sign pointing to "Village Estates," which at the time was just a few plywood houses halfway under construction. Elsewhere, I saw one of those familiar chain store shopping center complexes with the name "Palomar Village." Then, on another stretch of road between Encinitas and Temecula, the phony villages weren't even given a name: the generic, modular, single-use, residential 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 disingenuous, deceptive villages - chances are they're all over the country. I know the former first-lady reminded us that *It Takes a Village* (Clinton, 1997) but I don't think this is what she had in mind.



Photo by EC Mare, 2001

But wait, that's not all: corporate America is using the appellate "village" to market more than just real estate. I have recorded a few other examples, though there certainly must be many more. Perhaps we're all familiar by now with a line of Mercury SUVs called "Villager" (which is totally incongruous by any stretch of the imagination), and a new line of casual clothing by Liz Claiborne with the same cozy name - "The Villager" - as if you could become one by buying one of their shirts. Then there's an internet shopping service called, perfidiously, "iVillage."

Do you see what I'm getting at? Here's my point: there is something deeply meaningful, sentimental, even nostalgic about this word/concept/feeling - this phenomena called "village." All of us, no matter our heritage, have ancestors who grew up and lived out their lives in *real* villages. In these villages there was a sublime yet palpable sense of connection - to place, to family, to community, to nature: we could say undeniably that these people, our ancestors, really had roots! There was 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.

In the USA section of North America (I don't know enough to speak intelligently about Canada), we tended to bypass the organic village stage and rushed right into contrived commercial towns and accelerated industrial cities; after all, there was a whole big continent to rapidly subdue, along with its indigenous populations, with a treasure trove of natural resources to exploit. The agricultural sector, instead of clustering in the human-scale, nucleated settlements called "villages," like the rest of the world, dispersed itself over the entire landscape - first in homesteads, then in large single-family farms, finally succumbing to the monstrosity of corporate agribusiness industrial factory farms (see W. Berry, *The Unsettling of America*). An argument could be made that, outside of Vermont, there are no genuine villages in the USA (see Bryan and McClaughry, *The Vermont Papers*). In this hastily constituted continental society, a whole self-organizing substratum of collective socio-cultural development is completely missing, never existed, with consequences unknown.

In these days, profit-driven bottom-line corporations, subdividers and developers, perhaps unconsciously because they also are a product of this anomaly, are strategically tapping into this deep psychological need - this yearning for connectedness, this desire for belonging, this requisite for roots - by labeling everything as a "village." Sorry folks, you won't find the connectedness you are seeking while sitting in a Mobil/McDonalds!

Essential reading for those who want to understand the plight of America, as revealed through its hideously ad hoc built environment, is *The Geography of Nowhere: The Rise and Decline of America's Man-made Landscape* (1993), by James H. Kunstler. With an entertaining blend of shrewdness and wit, Kunstler traces the historical unfolding of settlement patterning in the USA, and observes:

"Eighty percent of everything ever built in America has been built in the last fifty years, and most of it is depressing, brutal, ugly,

unhealthy, and spiritually degrading – the jive-plastic commuter tract home wastelands, the Potemkin village shopping plazas with their vast parking lagoons, the Lego-block hotel complexes, the “gourmet mansardic” junk-food joints, the Orwellian office “parks” featuring buildings sheathed in the same reflective glass as the sunglasses worn by chain-gang guards, the particle-board garden apartments rising up in every meadow and cornfield, the freeway loops around every big city and little city with their clusters of discount merchandise marts, the whole destructive, wasteful, toxic, agoraphobia-inducing spectacle that politicians proudly call “growth” (p. 10).

Growth. Yes. Since WWII, the USA has been in a building frenzy that Kunstler notes “largely *became* our economy” (p. 15); and it’s still going on today. In fact, it *must* go on: Our financial system, based on the issuance of debt and the unearned rewards of exponential interest, needs continual, unending growth or it will collapse in upon itself.¹⁰ Explains Jonathan Dawson (2005, p. 76) of this debt-based economic system: “This necessarily builds in a growth imperative as all borrowers need to increase their income to repay capital and interest.” Never mind the entreatments of such intelligent systems-studies as *The Limits to Growth* and *Beyond the Limits: Confronting Global Collapse*, which warn that in a “materially-closed system,” such as the Earth, growth is finite, is best approached cyclically, and unrestrained exponential growth will eventually lead to “overshoot and collapse.” Never mind all that – there’s still space to fill and money to be made!¹¹ “American land law was predicated on the paramount

¹⁰ For a perspicacious discussion, see Daly and Cobb (1989) *For the Common Good*. In the Afterword, we read “Our national institutions governing money and finance are embedded in a culture which has come to accept exponential growth as the norm. Although real wealth cannot grow exponentially for long, our cultural symbol and measure of wealth, money, may indeed grow both exponentially and indefinitely. This lack of symmetry in behavior between the reality measured and the measuring rod has serious consequences (p. 408)...We conclude that the culture of exponential growth that now dominates Western society, and increasingly the world, is not sustainable. To move away from this culture, toward a culture capable of dealing with problems of nongrowth, would require us to tie money more closely to real wealth (p. 414).” And “real wealth,” by the way, always begins with the primary production of healthy, intact ecosystems.

¹¹ Appelbaum (1978) provides a convincing theoretical speculative argument linking population growth with economic growth: “Urban growth in the United States reflects the requirements of capitalist economic growth; it constitutes the principal spatial manifestation of such growth (p. 106)...Urban growth thus occurs within a framework of capitalist accumulation, involving production for profit, private ownership,

principle that land was first and foremost a commodity for capital gain" (Kunstler, 1993, p. 26).

"The identification of this extreme individualism of property ownership with all that is sacred in American life has been the source of many of the problems [we are reviewing]. Above all, it tends to degrade the idea of the public realm, and hence of the landscape tissue that ties together the thousands of pieces of private property that make up a town, a suburb, a state. It also degrades the notion that the private individual has a responsibility to this public realm – or, to put it another way, that the public realm is the physical manifestation of the public good" (ibid, p. 27).

And so it's no surprise that in the USA we arrive at that unwholesome, and indeed quite destructive, situation we find ourselves in today. Speculative land developers throw up cheap subdivisions, shopping centers, apartment and condominium complexes, or corporate retail enclaves, etc. for the purpose of making maximum profit off their investment, bottom line. If labeling any of these confused developments a "village" will hasten sales and increase profits, then so much the better – it's all tuned to the marketing. Idealistic notions like preserving valuable farmland or wildlife habitat, enriching the public welfare through cultural amenities or sociable 'places,' or even just creating something beautiful and enduring, something worth caring about, do not enter into the equation – *cannot* enter; for the moment individual profit is compromised with public benefit then the great speculative land binge is over, growth bottoms out, and, inevitably, the rest of us are stuck with cleaning up the mess left behind, for many generations to come. "In the generalised barbarity of the machine that

and a restricted state role...In order to maximize profits and, hence, further accumulation, capital must simultaneously strive to minimize production costs while maximizing commodity consumption. It is this double imperative that links capital accumulation with urbanization...Urbanization entails spatial concentration: concentration of people, resources, and infrastructure" (p. 108). Furthermore, quoting Harvey "the American city is now designed to stimulate consumption. The emphasis on sprawl, individualized modes of consumption, owner-occupancy, and the like, is to be interpreted as one of several responses to the underconsumption problems of the 1930s [during the depression]" (ibid, p. 109). Therefore, whether channeled into urban, suburban, or exurban expressions, as long as the conditions exist for further capital accumulation, we can expect to experience further growth, despite ecological and environmental consequences. Appelbaum's theory shows that there is an underlying process to growth that is primary, that the growth is taking place within a greater context.

colonises cities and landscapes with mediocre dwellings and boxes, everyone is on the losing side" (Krier, 1998, p. 83).

"[T]he living arrangement Americans now think of as *normal* is bankrupting us economically, socially, and ecologically...[It is] not merely the symptom of a troubled culture but in many ways a primary cause of our troubles...I've come to understand one of the chief impediments preventing us from comprehending the tragedy of our everyday environment: American culture is very abstract. Suburbia fails us in large part because it is so abstract. It's an idea of a place rather than a place. The way you can tell is because so many places in the country seem like no place in particular, and a lack of particularity is the earmark of abstraction" (Kunstler, 1996, p. 17).

I had the endearing pleasure of visiting Budapest in June of this year. A name for that city would be 'resplendent!' Everywhere I looked, the architecture was like artwork: the columning, the fenestration, the porticos and archways and iron gates, the frescos and friezes and tiled adornments, the spires and chimneys, the staircases and stairwells, the exquisite details of the roof lines and their shapes. Even common apartment buildings were works of art: in one case I saw the sculpted reliefs of two Atlas-like figures holding up either sides of a door jamb. The buildings were obviously constructed by skilled artisans and craftsmen who had a proud love for their art. The designers and architects were obviously motivated by a desire to create lasting beauty and elegance and sociability, as a celebration of life, as a tribute to their city, as a gift to their community and future generations. I was very moved and humbled by the ubiquitous magnificence of it all.

And to walk around in that city was sheer delight! The winding roadways were like miniature canyons through 4-story row-houses, with shops on the bottom floors and demure, railed balconies above, so that the people inside could step out and feel a sense of identity with the street life. Unlike a predictable, monotonous, mechanical grid, I never knew where the winding streets might lead: They might suddenly open up to a spacious plaza, intersected with rows of

trees for a sense of enclosure, with a statue or fountain at a strategic line-of-sight location, on the steps of which might be performing a mime. These plazas always had people milling about, as if the spaces were thoughtfully and knowingly designed to encourage casual social interaction. In one case, I saw a small crowd gathered before a soap-box political pronouncement.

And then there were the boulevards, lined with wide sidewalks so that the cafes and bars could extend themselves comfortably out into the light of day, with rows of tables topped with colorful umbrellas; once again, sociability was the goal. I saw one wide boulevard completely closed off to cars: in their place were planters of trees and shrubs and flowers, and literally hundreds of these outdoor tables stretched as far as the eye could see, tables filled with people conversing and laughing, and, considering the irresistible attractiveness of the gestalt, even falling in love – it was *June* after all.



One of the many beautiful plazas in Budapest. Can you detect the absence of right angles in the spatial arrangement? Center right is a statue with a mime. Photo: EC Mare, 2005

There were hidden alleys and courtyards, and an interior commercial district of small shops and businesses, paved with tannish bricks, also closed off to cars; of course, when this district was originally constructed, there were no cars! In and through these genuine places the people went about their ways, as people are wont to do. There was a huge, indoor central market, filled with produce and accoutrements from surrounding farms, within which local musicians were performing, even on a weekday. There was a promenade along the waterfront of the Danube lined with local street vendors, the tour boats tied up and ready for take-off just a short distance away. There were art galleries, an art museum, and an elaborately adorned medieval cathedral. There was a large, crenellated, human-made lake surrounded by flowering trees and shrubs, and encircled by pathways on whose pavement strode grinning bicyclists. I had the immense, multi-sensory pleasure of dining at sunset at a fine restaurant overhanging that lake. There were many other parks and open public spaces interspersed within quarters and districts that defined the greater city of Budapest.

All in all, this was a distinctly *urban* pattern that really worked: it worked because it *consciously* contributed, by design, in so many subtle and unspoken ways, to the well-being and quality of life of its inhabitants. Budapest was not built by speculative, avaricious, profit-driven “developers” in a mad rush of “growth,” but rather by the sequential, knowing and caring contributions of the inhabitants themselves, over the course of countless generations. They built a marvelously enchanting, profoundly beautiful *place* – or more correctly, an organic agglomeration of interrelated places – in which culture and commerce, art and life, form and function, all intertwine and overlap in a colorful and enriching, life-enhancing, *deeply humanizing* social mosaic.

I thought back to my dumpy hometown of Bellingham and realized what a cultural backwater I live in; in fact, the whole USA is a cultural backwater,

despite its superficial glamour. After my return, I earnestly tried to figure out just what *is* the culture of my home base, and all I could come up with is that it's some sort of imposed, generic corporate monoculture – the ever-colonizing, greed-based monoculture that's building shopping center, apartment, subdivision, and corporate enclave "villages" as a substitute for real places worth caring about. I remembered witnessing evidence of our exported USA 'culture' while walking around Budapest one afternoon, after emerging from one of those serpentine streets lined with locally-owned shops and artful architecture, when suddenly, there in front of me, shouting across a wide boulevard and centrally located plaza, like a former acquaintance you'd rather not be associated with but who still keeps showing up, to my utter disgust I saw a huge McDonald's sign perched high atop a fancy grey-slate roof. I wanted to puke – they had the unconscionable gall to hang little McDonald's banners from all the ornate streetlights.

The New Urbanism

ur·ban *adj.* **1.** Pertaining to, located in, or constituting a city. **2.** Characteristic of the city or city life. (American Heritage)

The “Urban Village” is appearing within, or paralleled to, a larger movement called “The New Urbanism,” so a complete understanding of the purposes and prospects of the “Urban Village” will necessarily include this more inclusive perspective. From the Congress of New Urbanism (www.cnu.org) we learn:

“The New Urbanism is an urban design movement that burst onto the scene in the late 1980s and early 1990s. New Urbanists aim to reform all aspects of real estate development. Their work affects regional and local plans. They are involved in new development, urban retrofits, and suburban infill. In all cases, New Urbanist neighborhoods are walkable, and contain a diverse range of housing and jobs. New Urbanists support regional planning for open space, appropriate architecture and planning, and the balanced development of jobs and housing. They believe these strategies are the best way to reduce how long people spend in traffic, to increase the supply of affordable housing, and to rein in urban sprawl. Many other issues, such as historic restoration, safe streets, and green building are also covered in the Charter of the New Urbanism, the movement’s seminal document.”

This appears to be a comprehensive agenda, relevant especially to the problems associated with the careless, wanton development that has occurred in North America since WWII. In this regard, it is interesting to note that the New Urbanism was the only solution forwarded at the end of the influential documentary, *The End of Suburbia: Oil Depletion and the Collapse of the American Dream* (2004, Electric Wallpaper). Could New Urbanism really be such a cure-all? Is it really that omni-effective?

We can learn more by going to the New Urbanist website (www.newurbanism.org), maintained on the East Coast:

"NEW URBANISM promotes the creation and restoration of diverse, walkable, compact, vibrant, mixed-use communities composed of the same components as conventional development, but assembled in a more integrated fashion, in the form of complete communities. These contain housing, work places, shops, entertainment, schools, parks, and civic facilities essential to the daily lives of the residents, all within easy walking distance of each other. New Urbanism promotes the increased use of trains and light rail instead of more highways and roads. Urban living is rapidly becoming the new hip and modern way to live for people of all ages. Currently, there are over 500 New Urbanist projects planned or under construction in the United States alone, half of which are in historic urban centers.

New Urbanism is the most important planning movement this century, and is about creating a better future for us all. It is an international movement to reform the design of the built environment, and is about raising our quality of life and standard of living by creating better places to live. New Urbanism is the revival of our lost art of place-making, and is essentially a reordering of the built environment into the form of complete cities, towns, villages, and neighborhoods – the way communities have been built for centuries around the world. New Urbanism involves fixing and infilling cities, as well as the creation of compact new towns and villages."

So, New Urbanism *does* intend to cover everything, and that ironically may be its limitation. I don't think this is "the way communities have been built for centuries around the world," in the same way that Budapest was built for example, but since New Urbanism has become very popular, I will save my critique for later and here just present a sampling of positions from some of its founding proponents and practitioners. Nonetheless, since New Urbanism is primarily an *American* phenomenon, I found it curious that scattered about the New Urbanist websites were images of beautiful, fashionable old *European* districts, as if to say, "This is the feeling and mood we want to re-create."

And now turning to the literature, says Peter Katz in a book by the same name: "The New Urbanism...addresses many of the ills of our current sprawl

development pattern while returning to a cherished American icon: that of a compact, close-knit community" (1994, p. ix). He then goes on to qualify, "The New Urbanism, though, is not just a revival. While it borrows heavily from traditional city planning concepts - particularly those of the years 1900-1920 (now coming to be regarded as a watershed era in the history of urban design) - the New Urbanists acknowledge that many realities of modern life must be dealt with: automobiles and "big-box" stores, to mention a few" (*ibid*, p. x).

So inherent are these "traditional city planning concepts" to the New Urbanists' vision that this genre of designers has often been called "neo-traditionalist;" and despite Katz's qualification, New Urbanism does indeed seem to be essentially a "revival" of certain timeless community design principles, and often is portrayed in terms of a romanticizing nostalgia - a desire to recover much of what has been lost in the manic frenzied growth of the last half century. Regarding the New Urbanists attempt to retrofit the suburban pattern, as a principal application of their theory, Mark Fink highlights this "nostalgia" inference in an excellent article in the *Journal of the American Planning Association*, way back in the Summer of 1993, as New Urbanism was just beginning to take off:

"The suburban vision is exemplified in the work of Andres Duany and Elizabeth Plater-Zyberk and other neo-traditionalists. Bemoaning the direction of American development over the past several decades and believing that people want towns not suburbs, they seek to recreate the sense of community that seemed to exist in earlier times. Many neo-traditionalists hearken back to an idealized vision of the 19th century American town..." (Fink, p. 331).

Duany and Plater-Zyberk have gone on to make quite a name for themselves, and have been operating a very successful professional practice, winning influential contracts (225 at last count) in which to try out their New Urbanist vision. In a fairly recent book of theirs entitled *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream* (2000), touted on the back cover as

"the bible of urbanists," these influential architect-authors begin with a lament remarkably echoing Kunstler:

"You are against growth, because you believe that it will make your life worse. And you are correct in that belief, because, for the past fifty years, we Americans have been building a national landscape that is largely devoid of places worth caring about. Soulless subdivisions, residential "communities" utterly lacking in communal life; strip shopping centers, "big box" chain stores, and artificially festive malls set within barren seas of parking; antiseptic office parks, ghost towns after 6 p.m.; and mile upon mile of clogged collector roads, the only fabric tying our disassociated lives back together - this is growth, and you can find little reason to support it" (p. x).

The neo-traditional architects then go on to reason that *good* growth is possible, and ask:

"Do there exist man-made places that are as valuable as the nature they displaced? How about your hometown Main Street? Or Charleston? San Francisco? Few would dispute that man [sic] has proved himself capable of producing wonderful places, environments that people cherish no less than the untouched wilderness. They, too, are examples of growth, but they grew in a different way than the sprawl that threatens you now." (p. xi).

I don't know about you, but I never knew a "hometown Main Street," since I was a product of the suburbs. Still, the point is well-taken - *that it is possible* to create wonderful places. (Why am I reminded again of Main Street Disneyland?) Duany and Plater-Zyberk continually emphasize the virtues of the "traditional town" as the ideal to aspire to, but unfortunately:

"Somewhere along the way, through a series of small and well-intentioned steps, traditional towns became a crime in America. At the same time, one of the largest segments of our economy, the homebuilding industry, developed a comprehensive system of land development practices based upon sprawl, practices that have become so ingrained as to be second nature. It is these practices, and the laws that encourage them, which must be overcome if good growth is to become a viable alternative" (*ibid*).

Although, in this day and age, I would suspect that “good growth” is an oxymoron, nevertheless, I appreciate that they isolated the mechanism responsible for our pitiful built landscape: the developer-led “homebuilding industry.” (Hint: those beautiful, fashionable old districts in Europe were not built by an “industry” but rather by “guilds” of artisans and craftspeople.) I also value their perspectives because, even as theorists, they’ve been applying their ideas and successfully working through the system – something that more utopian visionaries rarely get a chance to do. Based on an idealized vision of the “traditional town,” they’ve been designing and installing whole new settlements (Seaside, Florida was the first), apparently motivated by values and goals not supportive of what Kunstler decried as the American creed: “that land was first and foremost a commodity for capital gain.” These architects, and a growing chorus behind them, are seeking to the best of their ability to create coherent, livable *places* – holistically conceived environments in which traditional qualities such as community, family, neighborliness, sociability and a sense of belonging can once more become manifest.¹² These are not unrealistic goals because we’ve observed these qualities occurring naturally and spontaneously in settlements that grew up organically. (Recall the qualities of “universal village culture” that Critchfield cited.) The challenge for American designers of the 21st century, then, is to learn how to encourage and instill traditional wholesome qualities into a degraded, disfigured, post-modern and post-industrial landscape – and this is not going to be an easy task.¹³

¹² There has been appearing a whole new “Humanistic Geography” literature around this concept of “place-making,” spawned by Yi-fu Tuan’s (1974) *Topophilia*, and including: Edward Relph (1976) *Place and Placelessness*, Paul Adams, et al., (2001) *Textures of Place: Exploring Humanist Geographies*, Christopher Day (1990) *Places of the Soul: Architecture and Environmental Design as a Healing Art*, Christopher Preston (2003) *Grounding Knowledge: Environmental Philosophy, Epistemology, and Place*, Gillian Rose (1993) *Feminism and Geography: The Limits of Geographic Knowledge*, David Seamon (1993) *Dwelling, Seeing, Designing: Toward a Phenomenological Ecology*, and John Zeisel (1981) *Inquiry by Design: Tools for Environment-Behavior Research..* There is obviously a strong need for human beings to experience a sense of ‘place.’ The New Urbanism is taking big steps toward institutionalizing this place-making.

¹³ I don’t have enough evidence to support it yet, but I have a hunch that this “traditional town” idealization is some sort of cultural mythology, like *Leave it to Beaver*; and further, that there never were “compact, close-knit communities” in America at the same level of cohesiveness, egalitarianism, and common

One succinct description I found of the actual physical characteristics of a New Urbanist development came, ironically, from a critique. Susana Torre observes:

"The guiding ideas of the movement were laid out in the so-called Ahwahnee Principles,¹⁴ which envision an urban pattern that is decentralized and where residential developments are small and dense enough so "that housing, jobs, daily needs and other activities are within easy walking distance of each other." The community should also have a "center focus that combines commercial, civic, cultural and recreational uses;" streets should be designed to slow down cars; bicycle paths and convenient public transportation stops would increase pedestrian movement. Each community or cluster of communities should be protected from development in perpetuity by "well-defined edges such as agricultural green belts or wild life corridors." As far as the communities' social composition, "a diversity of housing types [would] enable citizens from a wide range of income levels and age groups to live within its boundaries" (1999, p. 36).

Torre then notes that, after a decade into the New Urbanist momentum: "[a]lthough the terms "New Urbanism," "neo-traditional planning," and "Traditional Neighborhood Development (TND)" may refer to works in a variety of urban settings – from infill structures to the replanning of obsolete shopping malls – the most influential of New Urbanist projects have been new residential communities built beyond the edge of metropolitan areas and initiated by commercial developers"... But wait! – "new residential communities" "beyond the edge" "initiated by commercial developers" – isn't that sprawl? Can the

purpose found in the traditional villages of the rest of the world. These hunches arise, not from suggesting some sort of defect in national character, but from recognizing the historically unique, urgently expeditious colonization and exploitation that the North American continent experienced, by people from many different nationalities, accompanied by inflated senses of individualism, mobility, and "manifest destiny," and motivated by the allure of capital accumulation. If my hunch has some truth to it, then designing for authentic community in America will be something new and therefore experimental.

¹⁴ "The principles [of the New Urbanism] were unveiled before 100 California mayors , city council members, and county supervisors at the fall 1991 conference of the Local Government Commission, held at the Ahwahnee Hotel in Yosemite National Park. It was a watershed weekend...Because of the site of their unveiling, the principles were dubbed the Ahwahnee Principles. They have been published and distributed throughout the United States" (Corbett and Corbett, 2000, p. 12). The Principles begin: "Existing patterns of urban and suburban development seriously impair our quality of life" (*ibid*, p. 13).

problem be solved using the same methodology – the same basic developer-led pattern of growth beyond the edge – while adding some new packaging? Can community and a sense of belonging really be nurtured in developer-led, master-planned, detached subdivisions simply by mimicking some of the physical elements of a so-called “traditional town?” Somehow I think there is more to it than that.

Torre then levels her critique squarely at the social consequences:

“If the New Urbanism is to become truly urban, larger problems and more diverse populations will need to be addressed. Other replicable urban patterns must be created to counter-balance the vision of encapsulated communities that epitomize New Urbanist design. These patterns should provide solutions to the problem of how to design good edges and points of contact, so that adjacencies between different kinds of communities can happen without walls, gates, or greenbelts” (*ibid*, p. 41).

This point is also well taken because, for many, New Urbanism is just another form of gentrified elitism. Some observe that “[n]ew urbanist developments are simply too expensive” (York, 2006, p. 45). Fink noticed this too at New Urbanism’s inception: “new communities based on this concept tend to be havens for the more affluent classes” (p. 332). Perhaps the “replicable urban patterns” that Torre is calling for are to be found in the Urban Villages of the 21st century? We’ll explore that next; but first, no analysis of the New Urbanism would be complete without including perspectives from Peter Calthorpe. In this case he is outlining his vision of an extended urbanization:

“The New Urbanism is concerned with both the pieces and the whole...First, urbanism...should be applied throughout a metropolitan region regardless of location: in suburbs and new growth areas as well as within the city. Second, the entire region should be “designed” according to similar urban principles. It should, like a neighborhood, be structured by public space, its circulation system should support the pedestrian, it should be both diverse and hierarchical and it should have discernible edges...[The New Urbanism] shows that the relationship between architecture and public space can be “urban” regardless of building

height or mass; that spatial hierarchy and connectedness can be rendered regardless of land-use intensity; and that pedestrian life can exist in single-family neighborhoods as well as on tenement streets. Applying these principles in the unlikely areas of the modern suburb, while coping with its economic and social imperatives, is one important contribution of the New Urbanism" (in Katz, p. xi).

Mr. Calthorpe is also winning BIG projects, but I wonder if it's really such a good idea to apply urbanism "throughout a metropolitan region regardless of location." This reminds me of Los Angeles. Maybe it all comes down to definitions and the different meanings that can be derived from certain terms? In *The Next American Metropolis: Ecology, Community, and the American Dream* (1993), Calthorpe explains his terminology: "By urbanism I do not mean city-like densities and high-rise buildings, I mean the qualities of community design which establish diversity, pedestrian scale, and public identity regardless of location or density" (p. 3).

Just for the record, I want to note again that *traditionally*, for the human and settlement geographers, urban *did* refer to particular locations with particular defining densities. Calthorpe's formulation, then, in my opinion, is not so much "traditional" as it is *revisionary* – and explicitly suited for the reparation of the scattered, fragmented American milieu. What he envisions is a decentralized urban pattern spreading throughout an entire metropolitan region, with multiple nodes and foci all linked together by regional transit. In this new formulation, "urbanity" is defined not so much by "city-like densities and high-rise buildings" but rather by certain qualities and formations of the built environment capable of fostering a certain desired social character. In *The Next American Metropolis*, Calthorpe develops and articulates these qualities and formations quite clearly in his conception of TODs (Transit Oriented Development), a conception receiving widespread acceptance and application even to this day.

Of a predecessor book, *Sustainable Communities: A New Design Synthesis for Cities, Suburbs, and Towns* (1986), co-authored with Sim van Der Ryn, Calthorpe reflects: “That book was the beginning of an effort to define the form and technologies of communities which could be environmentally benign, economically efficient, and socially robust...Although that work defined the environmental and technical basis of sustainable communities, it failed to incorporate the “urbanism” which makes communities socially vibrant and alive...My work since that time has been an effort to complete that picture and find the forms which could integrate urbanism and environmentalism” (*ibid*).¹⁵

When I first read that, I placed a question mark beside the phrase “integrate urbanism and environmentalism;” after all, aren’t these two -isms mutually exclusive? Isn’t urbanity an artificed realm devoid of natural environment? Isn’t the environment a place where people go to escape urbanity? Since these dualities are ingrained in the thinking of the general population and instituted in the bylaws of the planning profession, then perhaps a revisionary re-conceptualization is just what is needed; for, this goal of integrating urbanism and environmentalism may be – *must be* – the key to any sustainable settlement agenda for the 21st century.

In *The Next American Metropolis*, Calthorpe says: “This book is about the ecology of communities (p. 9)...Not the literal ecology which deals with natural systems and seems to stop just short of the human habitat – but a broader, more philosophic “ecology” which teaches that diversity, interdependence, and whole systems are fundamental to health” (p. 12). I think that what he’s alluding to here

¹⁵ *Sustainable Communities* begins with a suggested epistemological basis for undertaking this kind of design work. We read in the Foreword: “Our fundamental premise is that Industrial Culture has the means to transcend the apparent conflict between material progress and planetary health, between individual gain and common good. What we term ‘sustainability’ was a reality inherent in many preindustrial cultures. It was usually built into their beliefs, their practices, and the design of their environment. Sustainability is inherent in what earlier people – and many people today – hold sacred, and yet, it has been dismissed, ignored, and desecrated by the idea of progress. Our vision is that what is sacred is our relation to life and living processes, and that this can be made manifest in the design of our everyday environment...What must count for knowledge in the design of a sustainable culture is ecology – a balanced connection and adaptive fit between the products of the human mind and the processes of nature” (p. iv).

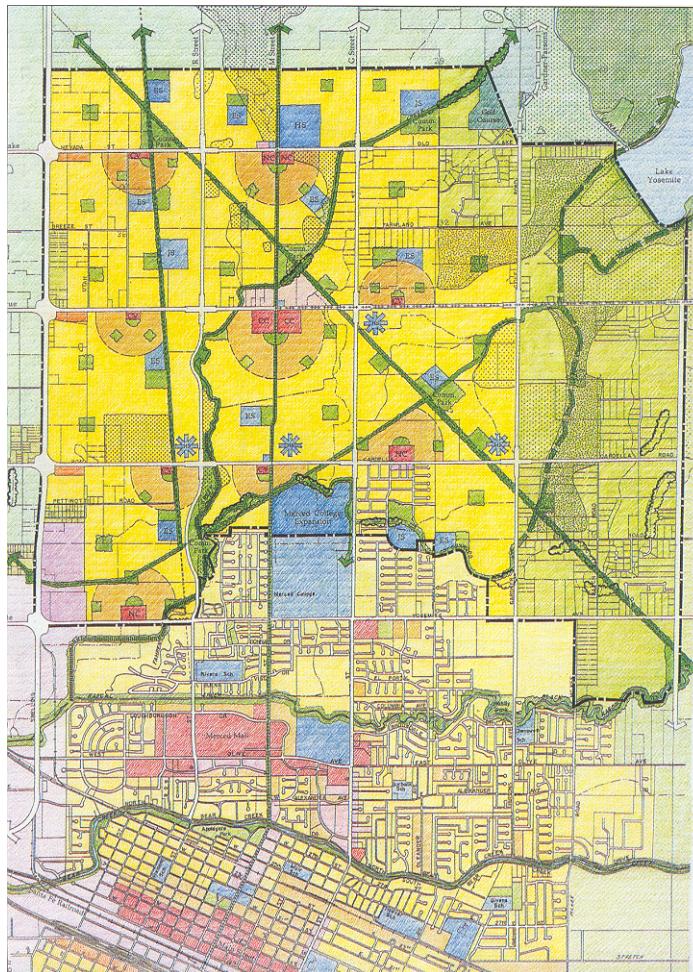
is a *human* ecology – a broadly multidisciplinary human ecology focused at the scale of the human habitation system. This opening, this attempted integration of urbanism and environmentalism within a habitat-focused human ecology, may be just what is needed to make sense out of placing those two other seemingly contradictory terms – “urban” and “village” – alongside one another.

I've seen some of the more purely urban New Urbanism retrofits in Seattle and here in Bellingham, and I must say they are a big improvement; however, something still seems to be missing, for they are very much catering to an upwardly mobile, professional class with disposable income. I've seen “mixed-use” shops and offices on the ground floor with apartments and condominiums above, but these shops are usually specialty stores like boutiques, gelato and espresso nooks, or wine merchants, and the offices contain the likes of lawyers, accountants, and investment brokers. The density is certainly increasing, and there are a lot more well-dressed people walking about, going from destination to destination, but I can't help from wondering what all these ‘densified,’ affluent urbane people would do if there happened to be an interruption of food deliveries to the big supermarket down the block?

Oddly, since the retrofit is happening by the building rather than by the block, some of these end up looking out of place. They seem to be lacking context, like islands of purposeful intelligent aesthetic coherency in a sea of otherwise random discontinuity. For example, a New Urbanism building (called the 12th Street Village!) appeared on a corner in which the public will need to cross four-lane streets in order to enjoy its “pedestrian friendly environment.”

Still, like Torre noted, the more influential New Urbanist projects are being built on undeveloped land in New Growth Areas, as whole new subdivisions attempting to assume the character of integrated ‘towns’ or ‘villages.’ It is obvious that North America is still in its expansion phase, for it is

generally still more profitable to build out rather than to infill.¹⁶ In that sense, New Urbanism's most useful contribution at the moment may be setting a standard for what Duany termed "good" growth.¹⁷ As an example of this latter function, here is a regional plan called "Merced Villages" (from Calthorpe, 1993, pp. 134-5):



¹⁶ As this paper goes to press, that situation may be changing: "Conventional wisdom has long held that mixed-use infill is far more expensive than ground-up greenfield development – and that the additional costs involved dwarf potential profits. However, with the ever-rising cost of land throughout the nation and a segment of the public eager to embrace urban-style, mixed use living, the advantages to this particular niche finally outweigh the costs" (Jackson, 2006, p. 12).

¹⁷ Is this growth really "good?" "Organic growth stops at maturity, short of which it leads to monstrosity. Maturity corresponds to the full capacity of becoming and being. The desire for growth and unlimited progress corresponds to a negation of adulthood, to a childish view of never-ending adolescence. The obsession with growth at all costs misunderstands not only the basic principle of all life; as a stock response it provokes new and rabid forms of conservatism" (Krier, p. 67).

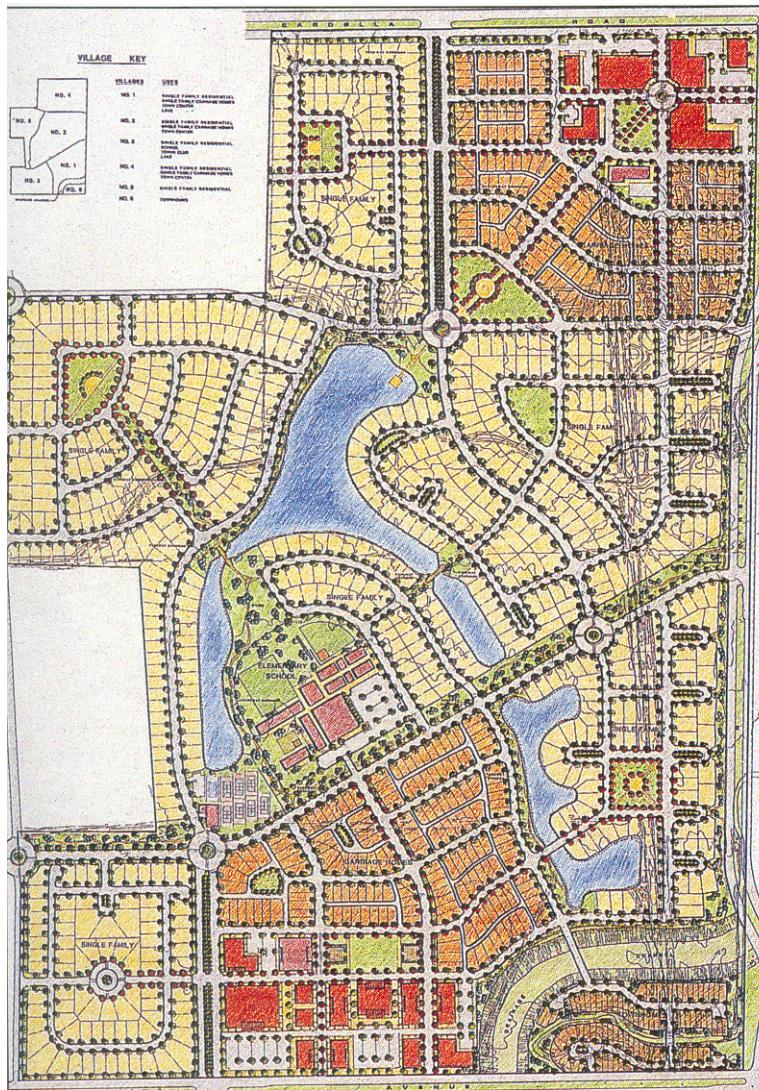
I chose this example not because it is necessarily the most recent but because 1) it shows most vividly the recurring pattern of North American development followed by the New Urbanist solution, and 2) this solution comes from proposing new developments that are explicitly called “villages” (but not yet “urban villages”). Here is the typical abstract, two-dimensionalizing gridiron, no doubt laid out by some surveyor in the 1800s when Merced was little more than a rail stop, followed to the north by piecemeal suburban sprawl. The New Urbanist solution comes from designing future growth to be channeled and contained within comprehensible, identifiable, nodal ‘communities’ – neighborhood TODs.

“This plan is unusual in that it accommodates a forty year growth demand, rather than the typical twenty year planning period. The city had developed the concept of three new villages to accommodate 75,000 of new population and had laid out a street network which included three expressway status roads and freeway-type interchanges. The redesign of this “three village plan” substituted nine pedestrian villages within an arterial grid – approximately one neighborhood in each 640 acre section (*ibid*, p. 134)...A detailed economic analysis rendered a specific program for the amount and type of retail which would be required for the growth area. This retail component was distributed between the nine villages helping to create variety in each. Through the center of the site a new trolley system would be constructed, making those villages on the transit line major community centers” (*ibid*, p. 135).

In the above map, the center of each “village” is clearly marked with red squares, surrounded by an “urban” core demarcated by orange semi-circles, extending out to “secondary areas” in yellow, which are designated for more typical single-family housing. Parks are interspersed as green blocks and schools are blue.

While this is certainly a commendable example of making growth “good,” or at least tolerable, zooming in for a close-up of a couple of the “villages” (p. 135) raises some relevant questions about long-term sustainability, which is one

of the professed criteria in the New Urbanism Charter, and which, of course, is a defining characteristic of traditional villages:



Explains Calthorpe: “[T]he plan shows two retail centers each with a village green and moderate density housing. In the middle a lake, elementary school, and community recreation facility are shared by both villages and the single family neighborhoods” (p. 135).

An initial query would be: where are the villagers going to work and make a living? They can't all find employment in the retail centers or the school; thus they'll be forced to commute. Another question, which arose previously with the urban retrofits and is just as valid here: what happens if the trucks are

no longer able to bring food reliably into the “retail centers?” Where would the people go to feed themselves?

A “village” is a self-contained, self-reliant, self-organizing social-cultural-economic living system that is able to meet its essential needs internally, all by itself. The Merced villages appear to be more like residential-consumer “suburban neighborhoods” – albeit with some additional amenities to make them more comprehensible integrated ‘communities,’ but lacking any real basis for self-reliance. True villages would incorporate primary production capacities (e.g. agriculture, agroforestry, and aquaculture) right into the inclusive settlement configuration. Energy production and waste management would likewise be self-contained. The passive consumer “retail centers” would be replaced with active producer “commercial centers,” with markets. These commercial centers would include craft workshops, research labs, micro-enterprise and light industry capacities so that the residents could manufacture useful products for their own use, as well as develop surplus to be traded with neighboring villages. True villages are recognized by their diverse, multi-faceted, self-reliant internal economies, providing a means of right livelihood for their inhabitants.

Calthorpe speaks intuitively about “ecology” as the basis of design, but this plan was likely drawn on a computer program in an office in San Francisco somewhere – the drawer-technicians probably never actually saw the site. During implementation of this plan, the land would need to be graded by heavy machinery to conform to the design instead of the design conforming ecologically to the land; thus the plan is just another geometric abstraction. Most troubling of all, a high-stakes developer would need to be called in to do the implementation work, in one fell swoop. This developer would be an outsider having absolutely no long-term commitment to the place: once the work was completed and the profit was deposited (s)he would be off to another ‘growth’ project somewhere else. And the people moving into Merced Villages? They

likewise would be coming from someplace else, mostly transplanted from the Bay Area, primarily with the intention of making a real estate 'investment' rather than establishing long-term sustainable 'community.' This all may sound rather cynical but that is the nature of real estate development in North America; and New Urbanism, in practice, seems to be taking just a small step beyond conventional methods.

All in all, I find the New Urbanism, in theory, to be a thoughtful collection of useful and time-tested principles for creating coherent, livable places, and for rectifying the incoherency and fallibility of typical North American development. However, I believe that the utility of New Urbanism, as practiced, will ultimately prove to be time-dependent – it is certainly not a cure all. I would say that its methods are relevant during historic conditions of perpetual growth but in an era of de-growth its methods will no longer apply – new methods will be required. The underlying principles of New Urbanism, being timeless, will endure but perpetual urbanization (just as limitless capital accumulation) is a fanciful notion, not the least bit sustainable.

What about the Urban Village?

The Urban Village: As Defined in the Literature

The first reference I found to the actual use of the term “Urban Village,” *per se*, was in a 1976 book of that title – an historic sociology of Germantown, Pennsylvania, written by Stephanie Wolf.¹⁸ Ms. Wolf shows trenchant insight by devoting her first chapter to a discussion of terms. Of the village: “Here then are the basic criteria: a small, homogeneous, agricultural community, lacking any real divisions of class or occupation and ruled by a traditional hierarchy made up of the village elders” (p. 17). Of the city: “A city is really the opposite of a village in many ways – large, heterogeneous, divorced from the soil, characterized by division of labor and class, and often ruled by the young (or at least not the most elderly), nontraditionally oriented members of the upper class” (p. 18). And towns: “Towns are those communities that fall between the two extremes. They share with cities the fact of being basically nonagricultural but lack the mystic “non-material aspects of civilization, together with their manifestation in institutions and monumental architecture”” (p. 20, quoting from E. Jones, 1976, p. 5).

After stating that “eighteenth-century Germantown was probably a town, although it possessed many specific urban attributes” and “[i]n other ways, it hardly seemed more than a village,” Ms. Wolf continues to extrapolate ideas from Mr. Jones in a very interesting analysis of the underlying meaning of this term “Urban Village:”

“While this odd combination of highly urban and purely village traits in the same community is not a familiar model in western civilization, Jones finds it common in the large town-like centers of

¹⁸ Actually, predating this book is a title *The Urban Villagers* (1962) by sociologist Herbert J. Gans, who studied the lives of first generation Italian immigrants in Boston. “Though these people lived in the great and urbane metropolis, their lives were bounded and limited as if they still lived in their native peasant villages” (Sucher, p. 7). Since his book is about *the villagers*, I chose to begin with Ms. Wolf’s book, which gets right into *the village*.

precolonial and colonial Africa. He concludes that “although these often had more of the characteristics of a large village, they cannot be denied urban status”...There is a common denominator between these African “cities” and the towns of colonial America, in that both are *artificial population centers* in the midst of very thinly settled areas, *bearing little organic connection to their surroundings*. It may be, therefore, that this pattern of a community that exhibits tendencies from both ends of the urban-rural continuum, rather than from some midpoint along the line, as westerners are conditioned to think of it, is more characteristic of colonial settlements than has been generally recognized” (p. 20, emphasis added).

In colonial conditions throughout North America, settlements were often thrown together rather hastily, usually on an abstract grid, thus “bearing little organic connection to their surroundings.” “The bases for traditional communities [were] lacking; the influential factors [were] heterogeneity, mobility, and a need for the trade and manufacturing facilities of an urban area” (*ibid*, p. 21). And so, while these pioneer settlements lacked the sophistication and density of civilized urban centers ‘back home,’ and while they surely would have been regarded as mere ‘villages’ by more cultured visitors, much of the psychology and sociology of the opportunistic, resident-entrepreneurs in these colonial settlements was distinctly urban – they were, by and large, relatively sophisticated *men* there to exploit abundant natural resources and quickly convert them into pecuniary instruments. And so begins “this pattern of a community that exhibits tendencies from both ends of the urban-rural continuum, rather than from some midpoint along the line.”

Is this same sort of colonizing mentality still alive in North America today in the form of opportunistic suburbanizing sprawl? With so much acreage on the continent still left to be subdued, is raw undeveloped land, procured by title, one of the remaining natural resources easily exploitable and quickly converted into pecuniary gain? From this perspective, profit-hungry ‘developers’ might very well be considered the last of the colonizers; and like all colonizers, they have

little regard for the long-term consequences of their exploitative actions on resident populations. (See Case Studies.)

The first reference I found to the use of the term “Urban Village” specifically in a planning context was from the City of Phoenix’s 1985 General Plan, where:

“The city adopted a General Plan calling for nine “urban villages” – cities within the city – most of them near regional shopping malls. The idea...was to focus intense office and retail development in the village cores, with less intense commercial and residential uses radiating outward from each” (Bingham, 1989, p.6).

Additionally:

“The new American urbanism, as manifested in the Sunbelt, is qualitatively different from the traditional city of the Northeast or Europe, and therefore, traditional models of urban form do not work for their region. The *urban village* concept developed by the city of Phoenix, Arizona, offers a new model, which practitioners are using to mitigate the urban problems in the area” (Fink, p. 320).

Calling these “urban” problems is perhaps, once again, stretching it a bit, since later Fink goes on to say, “Sunbelt growth represents the metropolis as suburb” (*ibid*).¹⁹ Nevertheless, in this nascent planning usage, the goal of the Urban Village was to bring about some sort of definition and focus to a rapidly spreading sprawl, characterized as it was by low density, open landscapes, spread-out land uses, segregation (both demographically and in terms of land use), and automobile dependency – characteristics, by the way, completely contrary to true urbanism. Phoenix used the concept of the Urban Village as the unifying element of the plan “to satisfy the psychological need to belong to an identifiable community within a large city with a sense of control over its environment” (City of Phoenix, p. 1). “Each village is to contain 100,000 to 150,000 people...each core is also to provide a pedestrian environment with

¹⁹ If you’ve ever flown into Phoenix with a window seat you will know what he’s talking about.

plazas, common open space, shaded walkways...sophisticated urban design, and amenities that reflect the best of urban living" (*ibid*, p. 5).

Terminology is so very important if we are going to be able to find a language with which to meaningfully communicate with one another during the massive retrofit that awaits North America. That's why I opened this essay with an extended, nuanced, multidisciplinary definition of the term "village." I went on to demonstrate how the term "village" is being used as a marketing scheme by corporate America to generate sales in shopping centers, apartment complexes, subdivisions, etc. - even in commodities like clothing and automobiles. I suggested that labeling everything as a "village" is successful because it taps into deep, unsatisfied psychological needs. Here then is another example of this phenomenon: in conditions of unrestrained, unmanageable sprawl, the City of Phoenix sought "to satisfy the psychological need to belong to an identifiable community," so they subdivided their metropolitan region into nine large districts and proclaimed each one to be a "village." The scale they chose to do their subdividing - the 100,000 to 150,000 population range - is actually the size of a medium-sized "city" (and the report says so: "cities within the city"); but like I said, the word "village" feels good and attracts customers.²⁰

I know some people think that adherence to rigorous terminology is not so important, and to this position I would refer a recent article in the journal *Planning*, April 2005, where converted military bases are found to make "nifty "urban villages."" In this conceptualization, Urban Villages are "physically coherent communities of significant scale and population served by their own schools, parks, shops, and offices" (Krohe, p. 4). The author later mentions somewhere in Illinois: "The village of Glenview - an established suburban city of nearly 40,000 people...[sic]." Here are three distinct settlement patterns - village,

²⁰ As of this writing, The City of Phoenix has grown to 15 so-called urban villages! The latest, far to the north, is named simply "New Village." At 100,000-150,000 people per "village," we can estimate a growth in the last 20 years of some 600,000 to 900,000 people in this Sonoran desert biome. See <http://phoenix.gov/PLANNING/vpcommitt>

suburb, city – each with distinct social, economic, ecological and topological, even phenomenological, etc. design considerations, all jumbled together into one statement! We are given a glimpse of “a place that is no place in particular” – Glenview, Illinois – an abstract, amorphous blur of a human habitation system, no doubt just another generic, easily forgettable product of developer-led sprawl. If I am talking about ‘apples’ but you think I mean ‘oranges,’ how are we ever going to find some fruitful common ground?²¹

The architectural theorist Leon Krier, whom Kunstler (1996, p. 15) enshrines as “the godfather of the movement to repair the damage done to our world by Modernism,” is quite clear on this terminology account: “There exists a direct link between the confusion of our cities and the language of planning. The lack of clarity in the vocabulary, the mixing-up of terms and the extensive use of meaningless professional jargon stand in the way of clear architectural and environmental thinking” (Krier, p. 37).

Another Americanized version of the prospect for Urban Village shows that “the psychological need to belong to an identifiable community” is not always recognized – nor wanted. One well-meaning, forward-looking developer proposed a so-called Urban Village in an infill area in the suburbs of Centerville, Utah. “The village would have housed a town square, with specialty shops and a home for the city’s resident performing arts group – with high density and multi-unit housing to support the commercial component...it would have been one of the first walkable communities in Utah” (Buttars, p. 40). This sounds like a splendid idea to me, particularly the inclusion of a performing arts group, yet the suburban residents of Centerville vigorously opposed the plan. It seems they preferred their structurally-isolated lifestyles to any chance for an increased opportunity for community – and their staunch position was no doubt fueled by perceived re-sale property values. As a result of the opposition, the site ended up

²¹ Even Calthorpe will occasionally befuddle terms, as on page 24 of *The Next American Metropolis*: “On the scale of the town, the village green is rarely considered or used in our modern suburb.” (?)

being given a permit for a Wal-Mart superstore with its accompanying “parking lagoon.” These residents, transfixed by the false promises of a generic corporate enclave mentality, like so many other well-meaning North Americans, got the ‘no-place’ feel they lobbied for – and Utah lost its first prospect at walkable community.

One essential observation could be made here: all these newly devised urban patterns – whether new urbanism, urban village, neo-traditional town, or Calthorpe’s TODs – all emphasize the need for “mixed-use” arrangements. Now, “mixed-use” is nothing new – after all, that’s the way settlements always *traditionally* developed; but “mixed-use” certainly is a deviation from what has become standard planning ideology and practice: that of strictly segregated, monoculture, single-use *zoning*. At this point, one has to wonder why the deviation in the first place? What was the rationalization behind rigidly segregating land uses through zoning laws? Kunstler (1993) once again offers an insight:

“Before the Civil War, American city life was a welter of small-scale activities. Zoning did not exist. “Downtown” in New York, Baltimore, Boston, or Philadelphia of the late 1830s was an agglomeration of small offices, dwellings, shops, warehouses, saloons, and little factories that turned out a fantastic array of mostly handmade products from pianos to teakettles to chocolate. Quite a few of the mingled enterprises gave off obnoxious effluents and odors: slaughterhouses, soap factories, glue works. John R, Stilgoe mentions an indoor dairy in Brooklyn housing 500 cows who never saw the light of day and were fed on distillery slops (p. 34)...the main purpose of urban use zoning at its inception was to stabilize real estate values in residential neighborhoods” (p. 55).

And a textbook on Urban Planning (Levy, 1988) concurs, describing zoning as a legal precedent for “the public control of private property” (p. 42). Speaking of an age where automobile ownership was rising astronomically, “promoting a vast wave of suburbanization:”

"One way to control congestion in commercial areas and prevent the invasion of residential areas by commercial development was through zoning. To many communities, both in older urban areas and on the suburbanizing fringe, the power to zone looked like the best way to protect what was desirable in the status quo against the vagaries of rapid economic and social change. Perhaps a single-family neighborhood was threatened with invasion by filling stations, used car lots, and hamburger stands. Zoning it so that only single-family houses could be built seemed like an effective and costly way to protect it from the undesirable side effects of progress" (*ibid*).

How ironic that a practice originally designed to "protect...from the undesirable side effects of progress" is now limiting further progress. And, as Ruth Knack notes in another issue of *Planning* (November, 1989), "Our suburbs are a traffic-plagued mess that can only be set right by developments that emulate the traditional American small town...Heading the list [of suburban "sins"] is Euclidean zoning...[S]trict separation of uses may have been justified when industry was growing, but now that the growth sector is services, the reason is gone" (p. 4).

So we can surmise that a "mixed-use" urban configuration is a re-discovered planning tool whose purpose is the attempted mitigation of the undesirable consequences of both sprawl *and* zoning – the "pattern language" of isolation – which undoubtedly go hand-in-hand. Both sprawl and "Euclidean zoning" are, significantly, concomitant to an era of rapid *growth*, such as the USA has experienced since WWII. Could the Urban Village, then, be an effective strategy of development for an era of de-growth, or what the French call *le decroissance* – economic contraction or descaling? (More on that later, for that possibility is at the heart of this paper).

The concept of Urban Village as practiced in the U.K. has a much more learned precedent to follow, originating with "the British Urban Villages Campaign, started up in late 1989 with the support of the [P]rince of Wales. The

mission of the campaign is to bring about more livable urban environments" (Corbett and Corbett, 2000, p. 9).

"The British Urban Villages Campaign engages in public education and supports development that meets its basic criteria. Members have promoted urban villages on large inner-city brownfield sites (previously utilized properties that may or may not suffer from toxic contamination), on suburban and urban peripheries, on infill sites (unused properties within the existing urban area), and on greenfield sites (properties outside the urban area that have never been built on)...At the national policy level, the group is receiving considerable support" (*ibid*, pp. 9-10).

Apparently the group produced a book: *Urban Villages: A Concept for Creating Mixed-use Urban Developments on a Sustainable Scale*, but I could find no reference for it at Amazon.com. Equally puzzling, the group's website: www.urban-villages-forum.org.uk has been "removed." An "Urban Villages Forum Briefing Sheet" (1998) produced by The Institution of Civil Engineers, however, is still available for download. In the Briefing Sheet, which I assume is a condensation of the book, the concept of Urban Village is approached very intelligently, from a multi-disciplinary perspective. What is an Urban Village? According to the Briefing Sheet:

"An urban village is a concept of settlement which is small enough to create a community in the truest sense of the word - a group of people who support each other, but big enough to maintain a reasonable cross section of facilities. Walking determines the size - a 10 minute walk from one side to the other. To provide a sufficiently large population to maintain a range of community facilities all within a walkable distance means the density of development must be high. An urban village is densely developed in the centre, with town squares and key community focal points, density eases away from the centre, and the boundary of the village is marked by greenspace" (p. 1).

Key characteristics according to this report include:

- mixed use development
- 1:1 ratio between jobs and residents

- acre size – 40 hectare – say 600m by 600m
- all within under 10 minutes walk
- population 3,000 – 5,000 – large enough to support range of activities and facilities
- small enough to enable people to recognise each other and to encourage neighborliness
- pedestrian friendly environment
- catering for the car without encouraging car use
- full range of types and sizes of buildings
- housing – full range of types, flats, retirement homes, buildings suitable for work from home, student housing, etc.
- mixed tenure for both residential and business accommodation
- central square/community area
- Each Urban Village is planned and developed through a Master Plan, backed by a series of codes, and an environmental action plan covering how the environmental impact of the village is to be managed and minimized.

Here then, finally, is a coherent, concrete vision of sustainable community. The Briefing Sheet, two pages total, goes into more detail concerning the physical layout and the processes by which the Urban Village will be planned and implemented, including public involvement. It seems the Prince of Wales believed enthusiastically that widespread application of this concept would do much to alleviate social ills in his country; however, and regrettably:

“A survey by...Cardiff University researchers of 55 developments calling themselves urban villages found that most fell far short of incorporating the concept’s founding principles. In some cases, they were little more than imaginatively labeled housing estates.

This dumbing down has also been a cause for concern at the Urban Villages Forum. Research associate Peter Neal says: ‘True urban villages are difficult to deliver and we have seen the term

being hijacked by many developments that pay scant regard to core urban village principles.'

So ten years on, Prince Charles' vision appears to remain something of a pipedream. If the Cardiff University research is to be believed, the success of a handful of urban villages is being overshadowed by developments that use a smokescreen of inventive language to prolong the urban planning practices on which the prince blamed many of the country's social ills in the first place" (Biddulph, 2002).

Neal, mentioned above in the Cardiff study, edited a 2003 book, *Urban Village: The Making of Community*, in which he focused the urban village concept on "neighborhood" redevelopment or reconfiguration, and in so doing defined explicitly the "distinct district" to work with:

"[W]e embark on an urban renaissance that seeks to re-establish our towns and cities as great places to live. Central to its success will be the fundamental role played by the neighborhood, for it is at this scale that communities can be established and a sense of security, sociability and economic purpose can be formed...*Urban Village*...describes the principles and process of creating attractive, socially diverse and economically sustainable mixed-use neighborhoods" (from the cover).

I'm left wondering what exactly it would take to convert a "neighborhood" into a "village," for that is what's being proposed. Unfortunately the book doesn't go into that kind of detail; instead, by demonstrating case studies, it just assumes that a mixed-use neighborhood *is* a village.

A Winter 2005 review of Neal's book in the *Journal of the American Planning Association* recognizes that "'Urban Village' is an oxymoron," and goes on to say, "The book appears to be aimed mainly at a UK readership to demonstrate that *there is such a thing as an urban village...*[T]he book provides a useful primer for the concept of urban villages as promoted in the UK" (Billingham, p. 111, emphasis added). This concept, in Neal's interpretation, centers on the organization of space into "mixed-use" neighborhoods. Neal adds further qualification:

"In both the UK and the USA, there are parallel debates about proposals for new – and sometimes not so new – *patterns of smarter and more efficient growth*. They provide an essential context for the role of mixed-use urban villages and new approaches to traditional urbanism (p. 33)...based on fashionable sustainability concepts reflecting much of the principles that underlay the original urban village initiatives – mixed use 'new urban' physical structures at medium-high densities, within walkable distance of public transport" (p. 35, emphasis added).

I was surprised to read here a Brit advocating "smarter and more efficient growth," living as he does on an island so populated that it must already import large quantities of food and resources just to "sustain" itself at current levels. The Urban Village used in this vein may be an example of, as he says, "fashionable sustainability concepts," but it is not an example of sound ecological or socio-economic sustainability. As was noted earlier, economist Herman Daly states flatly that continued "growth" – as in getting bigger and more energy consuming – is no longer sustainable whereas continued "development" – as in increasing quality and refinement – can not only be sustained, it is, in fact, highly desirable.²² Simply finding ways to pack people more efficiently into a given space, while retaining some measure of livability, is not the most creative use – and in an era of *le decroissance*, certainly not the most practical use – of this concept Urban Village. Here then is reason to be cautious about openly

²² "Economists will complain that growth in GNP is a mixture of quantitative and qualitative increase and therefore not strictly subject to physical laws. They have a point. Precisely because quantitative and qualitative change are very different it is best to keep them separate and call them by the different names already provided in the dictionary. To grow means "to increase naturally in size by the addition of material through assimilation or accretion." To develop means "to expand or realize the potentialities of; to bring gradually to a fuller, greater, or better state." When something grows it gets bigger. When something develops it gets different. The earth ecosystem develops (evolves), but does not grow. Its subsystem, the economy, must eventually stop growing, but can continue to develop. The term "sustainable development" therefore makes sense for the economy, but only if it is understood as "development without growth" – i.e., qualitative improvement of a physical economic base that is maintained in a steady state by a throughput of matter-energy that is within the regenerative and assimilative capacities of the ecosystem. Currently the term "sustainable development" is used as a synonym for the oxymoronic "sustainable growth." It must be saved from this perdition" (From an essay "Valuing the Earth: Ecology, Economics, Ethics" at www.dieoff.com/page37.htm).

embracing a so-called Urban Village project until the underlying principles have been identified, for there could very well be a political agenda attached.

Another example of a reason to be cautious stems from this almost unbelievable account of the purpose of the Urban Village from another book out of England: *City of Quarters: Urban Villages in the Contemporary City* (2004), edited by David Bell, where we read:

"This book examines the increasingly ubiquitous presence of distinct social and spatial areas – urban villages – in our cities. Created either through the enhancement of historically distinctive areas, or by developing and generating signatures from previously economically, culturally or spatially ambiguous areas, urban villages or quarters *seek to appeal to the consumption practices of the emerging nouveau riche of the professional, managerial and service classes*. Promotion of conspicuous consumption – art, food, music, fashion, housing and entertainment – is at the fore in these urban "shop windows"...Moreover, in recognition of the complex plurality of the contemporary urban villages, more prosaic 'low' street culture, working-class traditions, ethnicity, sex and sexuality are also increasingly commodified in narratives of place. In urban villages, the symbolic framing of culture becomes a powerful tool as capital and cultural symbolism intertwine" (p. 1, emphasis added).

The author begins writing like a knowledgeable designer, describing how "distinct social and spatial areas" are created "either through the enhancement of historically distinctive areas, or by developing and generating signatures from previously...ambiguous areas." These sound like effective ways to facilitate a sense of community within an otherwise anonymous, amorphous, dense urban form; particularly this valuable notion of "generating signatures" would yield a sense of unique identity, and is worth pursuing. But then I think the author confuses this valid project by interjecting his own value system: to say that this is all done to promote "conspicuous consumption" among the "emerging nouveau riche" I find to be a rather superficial, if not cynical, motivation. Is living in urban "shop windows," where everything including life itself is commodified, to be the

alienating end-stages of a degenerating post-industrial capitalism? I think so, according to this version of Urban Village, because the author reinforces his point:

“This is an urban Renaissance based on wealth creation associated with consumption (and the production of consumption), in the cultural and service industries, with a focus on visual attractions which encourage people to spend money – including an array of consumption spaces from restaurants, museums, casinos, sports stadia and specialist and designer stores (and not traditional industry and manufacturing). This is a post-industrial economy based on the interrelated production of such economic and cultural symbols and the spaces in which they are created and consumed” (p. 3).

Indeed, and with some sadness because I have been there, I can imagine deep within the bowels of London the emergence of these kind of “symbolic economies;” but I would argue that the Urban Village is a concept that could help to *ameliorate* this situation – not promote it. How long can conspicuous consumption endure in an economy of symbols divorced from the economy of Nature? The unfortunate sense of alienation, if not desperation, that can accompany this sort of ‘advanced’ urban living is starkly revealed in the following passage from *City of Quarters*: “The new ‘carnivalesque’ spaces (such as urban villages), while being centered on private consumption, are argued to create a collective sense of *belonging* (to those with the economic and symbolic capital to join in)” (p. 3).

Perhaps I’m interjecting my own value system here but isn’t belonging to an identifiable community based on heartfelt, reciprocal, meaningful human relationships a deep, trans-human psychological need? What then are we to make of a community where membership is determined by the amount and rate at which one can consume? All the versions of Urban Village examined so far have sought to create a sense of identifiable community within an otherwise indeterminable settlement form; however, I am certain that the fashionably chic,

“carnivalesque,” culturally and economically “symbolic” type of community promoted in *The City of Quarters* will prove to be a passing fad, lacking substantial meaning or durability in an Age of Sustainability.

There is another version of Urban Village coming out of the UK, closely aligned with the principles set forth in the Urban Villages Forum, which has a far more grounded purpose: that of using the concept as the unifying element in a post-industrial regeneration scheme. Here are a few of the proposed projects in this genre:

“Plans to build an urban village at a former steelworks near Wrexham were approved by local leaders last week...The project aims to transform 20ha of a 97ha brownfield site into a settlement of 469 homes. The first phase will include affordable and private homes. It will be designed to provide job opportunities – 1000 were lost when the steelworks closed in 1990” (*Planning Journal*, London, August 12, 2005, p. 2).

And then:

“Plans for the initial phase of a regeneration scheme to build Wales’s first Urban Village were unveiled last week...a joint proposal to create Coed Darcy on the former BP Llandarcy oil refinery site near Neath. The Prince’s Foundation and the WDA said they want to create a sustainable community that will be an example of how to carry out regeneration projects and teach traditional urban design...The project would transform a 270ha brownfield site into a settlement housing 10,000 people” (Wainscoat, 2005, p. 5).

Finally:

“The Winnington Urban Village Consortium’s application covered a 56ha site, the majority of which comprised redundant industrial land. The proposed development included up to 1200 dwellings, a primary school, a village centre, community facilities and land for new employment...The deputy prime minister agreed that the scheme will provide a mixed-use development on a brownfield site in a sustainable location” (Wood, et al., 2004, p. 17).

I find this land reclamation and regeneration version of the Urban Village to be the most promising application reviewed so far, fecund with sustainably-minded opportunities – for here is a genuine marriage between environmentalism and urbanism. This was Calthorpe's goal, after all, and the strategy that was suggested as essential for designing prototypes of a sustainable future. One of the proposed projects states explicitly that their purpose is *to create an example of sustainable community*. Some of the cross-referenced essential features include: mixed-use development, a village center, schools and other civic and community facilities, and most significantly *employment opportunities*. Since these are intended to be opportunities for displaced industrial workers, I am assuming the employment must be geared toward working class people with families, and not to the capricious and ephemeral “emerging nouveau riche.” All these features – and especially their working interrelationships in a holistic design scenario (if they’re thinking that far) – will contribute to a strong, solid, secure socio-economic base.

Some initial considerations:

There are proven ecological restoration techniques for cleaning up and reclaiming brownfield sites, but this process needs a few years before the place can begin to become inhabitable – I hope these developers aren’t planning to build their “village” directly on top of existing soils! During the interim restoration process, streams can be reclaimed and enhanced surface features like ponds can be added; recharging wetlands, where applicable, can be rehabilitated. With the addition of amenities like woodlands, parks, and riparian/wildlife corridors, the opportunity exists to have a fully recovering ecosystem be the context in which the village is placed. Remember: traditional villages are symbiotically integrated into their local ecologies.

In order to realize the proposed “urban” component of the Urban Village, densities will need to be increased toward the village center. This means multi-unit residencies of up to three stories with shops, offices, workshops, etc. on the

lower levels. These complexes, functionally interspersed with civic and cultural facilities around a ‘village green,’ need to be arranged in such a manner so as to create a comfortable and lively pedestrian environment. From what I gleaned from the brief blurbs above, it sounded like these developments planned to have only single-family units, and this will not create the desired urban character.

As far as the employment goes, it will not be enough to simply substitute the old industrial base with some kind of new, corporately-owned, high-tech light industry – although light industry has its place. If these are to be truly *sustainable* communities, as advertised, then they also will need to work toward and integrate measures of self-reliance and self-direction. This means that *primary production capacities* – centered on renewable agriculture, agroforestry, and aquaculture – whose capital and proceeds are owned by community corporations, need to be incorporated into the overall Urban Village system.

These ideas, and more, will be developed further in the final section of this essay. For now it is enough to re-emphasize that this ‘regenerative version’ of the Urban Village holds the most promising opportunity for a sustainable future. A more formidable challenge will come, perhaps, with applying regenerative and retrofit strategies to existing urban forms which are not necessarily on detached ‘brownfield’ sites. For a brief yet revealing survey of this urban retrofit application as it is currently being employed, here is a random sampling off the Internet. After reviewing these diverse examples, it’s easy to see why Neal bemoaned the “hijacking” of the original Urban Village concept:

First, from Canada, a project called Centuria Urban Village is nothing more than a high-rise complex: “This 16-storey Kelowna landmark features 149 condo-homes and integrates shopping, dining and amenities like a European-style spa and rooftop pool. It’s a cosmopolitan urban village in the heart of British Columbia’s fabled vacation paradise” (www.centuriakelowna.com).

Or how about one from Australia, an urban infill project “less than 5km from the centre of Sydney:” Paddington and Darlinghurst Community Group is

building “Resident Precinct 15”...“What makes this Urban Village special is its unique architecture, flora and fauna combined with an enthusiastic and welcoming community. With sweeping pedestrianised areas and leafy reserve, the Urban Village is an oasis of peace in a vibrant and multicultural city” (www.urbanvillage.org).

And then, out of the many diverse examples that could be found in the UK, here is an interesting “socialized” version, funded with 3.6 million British pounds from Pink Floyd musician David Gilmour: “A pioneering project to set up a new sustainable community in East London is currently underway. In the new “Urban Village” homeless people and key workers will live alongside each other. But it is not just about developing buildings[;] Urban Village will create a mixed community, helping to build a safer environment and foster neighbourhood renewal. Most importantly it will provide the ongoing training, counseling and other support that homeless residents need to help them move towards independent living” (www.crisissite.client.fatbeehive.com/projects/).

A few more urban retrofits from the USA show, once again, a wide variety of applications. First, from Illinois, “Lincoln Square Village” in the heart of downtown Urbana is “America’s second oldest mall transformed into a vibrant Urban Village” (www.lincolnsquarevillage.com/home/).

And then a curious mole-like example from Arlington, Virginia: “Crystal City is an Urban Village on more than one level – literally. A network of underground shops and walkways makes this community unique. Above ground, Crystal City offers a dramatic streetscape of shops, office buildings, and hotels, all close to National Airport and Metrorail” (www.commuterpage.com/art/villages/crystalcity.htm).

In luxurious Santa Barbara, a joint venture between the Redevelopment Agency and the Metropolitan Transit District has identified a 1.8 acre site in the heart of downtown that may be converted into an “Urban Village:” “The participants have recognized an opportunity to pursue joint development of a

mixed-use project on the site. The project is envisioned to include a mix of affordable and market-rate residential units, a public/private parking garage, a new MTD transit center, and various commercial, non-profit, and public uses on the site”

([www.santabarbaraca.gov/Resident/Community/Planning/Urban+Village+RF
P.htm?js=false](http://www.santabarbaraca.gov/Resident/Community/Planning/Urban+Village+RFP.htm?js=false)).

One more example highlights the unfortunate generic glitz to which this otherwise incredibly sensible concept can succumb. On the Las Vegas Strip, a project called, simply, “Urban Village:”

“...will comprise of five distinct affordable luxury communities totally [sic] almost 2400 residences including *lofts*, *brownstones*, *flats*, *live-work* and *high-rise condos*...Urban Village will feature one, two, and three bedroom homes ranging in size from just under 1,000 up to 3,000 square feet. Urban Village will consist of affordable luxury condominiums starting in the upper \$100s up to \$1 million [!]. . . DRG’s plans for Urban Village are to create a thriving, active community where residents electrify the streets. Terraces and balconies will overlook the village’s courtyards. Adorning the village will be elaborately landscaped gardens, several pools, cobblestone streets and gas-lamp lit walkways and streets. Residents and visitors alike will enjoy such retail as a flower shop, café and bookstore, in addition to services such as a salon, dry cleaning, mail/shipping and restaurants.” Says developer Phillippe Pageau-Goyette, “Urban Village will be the place ‘where the in-crowd will live.’ The South Las Vegas Strip is soon to become the Manhattan of Las Vegas!”

(http://www.dezignare.com/whatshot/05apr/13.Las_Vegas.html)

Such a wide array of applications – the anticipation of the Urban Village sure is becoming popular! There’s no need to comment further on these examples other than to notice that one doesn’t necessarily need to be ‘educated’ to be a ‘developer;’ one simply needs a marketing scheme and access to capital. Doesn’t it seem curious, though, that in all these examples the developers’ purpose is to provide a complete, ready-made, hassle-free environment into

which the residents can simply ‘move in’ – their only responsibilities being to come up with the payments and then assume a consuming posture?

Finally, I want to close this section outlining Urban Villages, as defined in the literature, with some thoughtful insights from David Sucher in his book *City Comforts: How to Build an Urban Village* (2003). Mr. Sucher served on Seattle’s Planning Commission at a time when then Mayor Norm Rice “[i]n an offhand and casual way...suggested that henceforth the city’s planning would aim to build *urban villages*” (Sucher, p. 7).

“It was genuinely a throwaway line and buried deep in his talk. But the response was galvanic. The phrase captivated people. It was seized upon. It struck a chord. It brought attention well beyond original expectation...Our reaction was: “Urban Village. Hmm...What a great idea. It’s brilliant. We like it. We’re all in favor. Sound’s great!” Then we turned to each other and scratched our heads and asked “What’s an urban village?” (ibid).

Indeed, what *is* an urban village? Sucher goes on to repeat an observation oft-noticed here: “At first glance the term might seem nonsensical and impossible: an oxymoron, the two words contradict each other” (ibid). But more than any other writer I’ve come across, Sucher offers an agreeable resolution to the inherent tension: “The term *urban village* is at heart a fragment of poetry [poiesis]. It’s a metaphor and a matter of tone. It’s a shorthand way of describing the *feel* we want from our cities...The brilliance of the phrase is that it sums up our coexisting desire for autonomy and community” (ibid, p. 6). “The words – *urban* and *village* – are filled with opposing emotions, reflecting our feelings about each environment...We want familiarity *and* anonymity...Both scales of settlement have flaws. People want the best of both worlds: the diversity, choice and independence of the *Urb* and the homey-ness and intimacy of the *Village*...Upon reflection, it seemed quite possible that urban village was a metaphor for a certain kind of city and a certain kind of relaxed relationship among people” (p. 8).

Here, then, we are left with our design challenge: *Homo sapiens* have come too far to return to the safe nest of the “traditional village.” Individuated, autonomous, self-directed identity has been too hard won to gleefully accept re-subsuming to the often limiting mindfold of indiscriminating collective identity; and yet, the contemporary urban and suburban contexts of ‘me-first,’ conspicuous-consumption individualism have proven to be wastelands for the sensitive human need for identifiable, heartfelt community. While this emerging concept of Urban Village seems to embody widely varying definitions (depending on who is doing the defining!) ultimately its most significant promise may be to serve as a context for bridging – or better yet, *integrating* – these diverging human needs. From this perspective, authentic Urban Villages of the 21st century may be seen as opportunities to become those human habitation systems where, as Stephanie Wolf illuminated, both ends of the settlement spectrum are included and focused in one place.²³

²³ For the authoritative reference guide, see Tony Aldous’ Bibliographies Index: “UR11: Urban Villages and (Other) Mixed Use Developments” at www.nottingham.ac.uk/sbe/planbiblios/bibs/urban/11.html

The Trump Card: Peak Oil

One amazing realization that comes after evaluating all the New Urbanist and Urban Village visions that have been reviewed so far is that they were all conceived in an era of energy abundance: the TOD, the neo-traditional town, the edge city, the sunbelt suburban retrofit, the military base reinhabitation, the ‘efficient growth’ neighborhood encirclement, the conspicuous consumption carnival space, the post-industrial regeneration scheme, the various developer marketing strategies, the inter-marriage of autonomy and community...were all conceptualizations designed to improve, correct, or lend balance to settlement configurations that arose in an era of rapid growth. The issue in this section will deal with: What happens on the down-side of the energy availability curve? What happens when the rapid growth – fueled by cheap, abundant energy – peaks, and then begins its descent into an era of de-growth – *le decroissance*? How valid will all these various New Urbanist and Urban Village re-conceptualizations of place be then?

Unless you’ve been stranded on a desert isle or holed up in a cave somewhere, you’ve heard by now of the phenomenon called “Peak Oil.” Peak Oil indicates that point on the energy availability curve where production reaches maximum volume, after which point demand begins to outstrip supply.²⁴ “[T]he depletion of any finite resource had to start from zero on discovery and end at zero on exhaustion, reaching a peak in between...[P]eak would normally come close to the midpoint of depletion, when half the total endowment in Nature had been consumed” (Campbell, 2003, p.6).

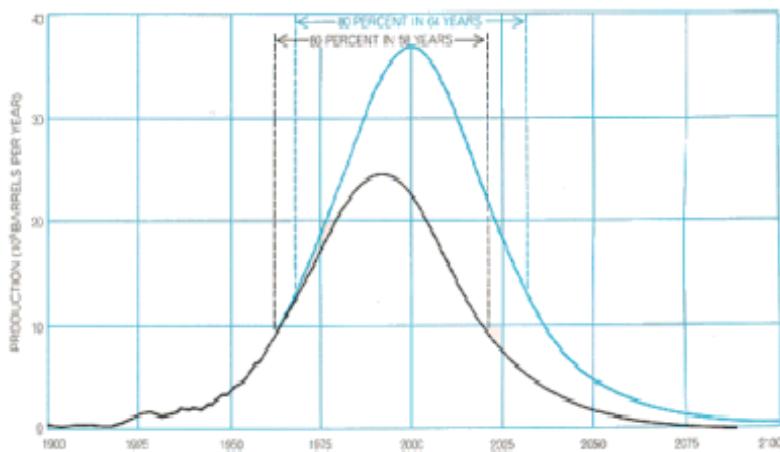
²⁴ While rapid growth was fueled by the ready availability of energy of all kinds – coal, hydro, nuclear, natural gas, etc. – the exploitation of each of these, in turn, was made possible by the accessibility of cheap oil. Thus, the energy availability curve and the oil availability curve sufficiently overlap for this cursory overview of a discussion.

The Peak Oil phenomenon is classically revealed in “Hubbert’s Curve:”

“During the 1950s, ’60s, and ’70s, Marion King Hubbert became one of the best-known geophysicists in the world because of his disturbing prediction, first announced in 1949, that the fossil-fuel era would prove to be very brief (Heinberg, 2003, p. 87)...Then, in 1956, on the basis of his reserve estimates and his study of the lifetime production profile of typical oil reservoirs, he predicted that the peak of crude-oil production in the United States would occur between 1966 and 1972. At the time, most economists, oil companies, and government agencies (including the USGS) dismissed the prediction. The actual peak of US oil production occurred in 1970, though this was not apparent until 1971” (ibid, p. 88).

Of course, nobody noticed in 1970 that oil production had peaked because at the time *the US was producing more oil than it had ever produced before*. Reality soon set in, however, and by 1973 there were long gas lines and a revised geo-political landscape in which the US required increasing access to Middle East reserves in the interest of “national security.” At the moment, the world is producing more oil than it has ever produced before – how would we know if we’re at the peak without the corresponding perspective of hindsight?

In 1971, Hubbert went on to predict a peak in global oil production:



From: www.hubbertpeak.com/curves.htm

This classic Bell Curve demonstrates one irrefutable pattern: a nonrenewable resource can increase its rate of production only for so long; at some point it will

'peak' and thereafter it will begin a permanent and irreversible decline (just as oil production did in the USA). Hubbert's prediction of world oil production peak sometime between 1990 and 2000 was based on insufficient data and, some say, minor flaws in his method; however:

"Hubbert immediately grasped the vast economic and social implications of this information. He understood the role of fossil fuels in the creation of the modern industrial world, and thus foresaw the wrenching transition that would likely occur following the peak in global extraction rates. In lectures and articles, starting in the 1950s, Hubbert outlined how society needed to change in order to prepare for a post-petroleum regime... [For example, he] believed that society, if it is to avoid chaos during the energy decline, must give up its antiquated, debt-and-interest-based monetary system and adopt a system of accounts based on matter-energy - an inherently ecological system that would acknowledge the finite nature of essential resources" (Heinberg, 2003, p. 91).

Contemporary analysts using current data have moved Hubbert's Peak forward, but not by much. Kenneth S. Deffeyes, for example, a Princeton emeritus who before 1967 conducted research at the Shell Oil laboratories in Houston, writing in 2001 stated clearly: "Global oil production will probably reach a peak sometime in this decade. After the peak, the world's production of crude oil will begin to fall, never to rise again. The world will not run out of energy, but developing alternative energy sources on a large scale will take at least 10 years" (from the Overview to Chapter 1).

Even closer to home, a report from CNN on December 7, 2005 disclosed:

"A House energy subcommittee met Wednesday morning to learn more about the so-called peak oil movement, which claims that by 2008 humans will have extracted half the earth's oil. In other words, we're using oil faster than we can ever hope to retrieve it. "We have all been enjoying the greatest party the world has ever seen: the great oil party," said Kjell Aleklett, president of the Association for the Study of Peak Oil, or ASPO...The professor said in a paper last year, "After the climax comes the decline, when we have to sober up and face the fact that the party is coming to an end." The hangover would mean not only the end of low oil prices but also a

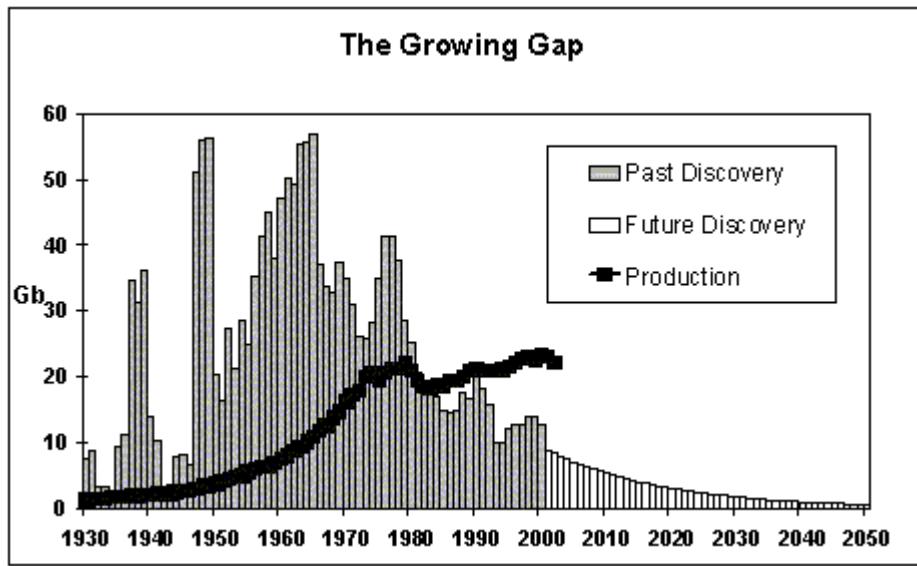
slowdown in world economic growth. The morning after could also lead to social and political unrest as many countries try to keep the party going even as oil disappears. While there is debate over when this peak will occur, said Rep. Wayne Gilchrest, R-Md., everyone can agree on one thing[:] “At some point in this century, oil production will peak and then decline” (Benner, 2005).

How reassuring to know that conservative elements within the US government now openly acknowledge Peak Oil. If only this willingness for acknowledgement was backed by coherent policy choices – then we could imagine, though not quite expect, some kind of conscious transition to a new energy regime. Unfortunately, many informed sources believe that the time to adjust for a smooth transition has already passed.

Colin J. Campbell, respected founder of ASPO and an exploration geologist for the oil industry beginning in 1957, reflects:

“[T]he economic, social and political life of the past Century was influenced by an abundant supply of cheap oil-based energy. It turned the wheels of industry; provided the fuel for transport and trade; formed the raw material for a host of products, and, above all, had a critical role in agriculture, fuelling the tractor and furnishing essential nutrients...[T]he population of the world increased six-fold exactly in parallel with oil production, suggesting a link” (2003, p. 1, emphasis added).

In the above article, Campbell displayed a graph showing the time lag between discovery and production peaks:



This graph reveals that the “peak,” from one perspective, is actually a plateau, and further suggests that there will be a time lag between identifying the problem and implementing solutions for it. The graph also refutes the argument made by economists, that somehow “the market” will provide a solution to oil depletion; for even in a period of accelerated exploration efforts, such as now, new discoveries have continued to decline. We are currently using 4 barrels of oil for every 1 that is discovered (Heinberg, 2005).

Campbell comments on his graph: “All of this is so incredibly obvious, being clearly revealed by even the simplest analysis of discovery and production trends. The inexplicable part is our great reluctance to look reality in the face and at least make some plans for what promises to be one of the greatest economic and political discontinuities of all time. Time is of the essence. It is later than you think” (2001).

And then, writing way back in 1986, before all this information became widely available, in a book entitled *Beyond Oil: The Threat to Food and Fuel in the Coming Decades*, a prescient John Gever put the whole phenomenon in perspective:

"Centuries hence, historians (or archaeologists) will almost certainly refer to the period of 1900 to 2050 as the Oil Age...But people who are voters and decision makers today...will live to see the end of the Oil Age. There are only ten or twenty years of per capita economic growth remaining before declining oil and gas production begins to drag the economy downhill. When that occurs, so much time and effort will have to be spent dealing with the week-to-week contingencies involved in meeting people's basic needs that it will be impossible to plan a post-Oil Age economy. Thus, we have now a small and closing window of continued prosperity during which we enjoy the luxury of deciding, consciously and carefully, what sort of economy we would like to have after the oil runs out" (pp. 247-249).

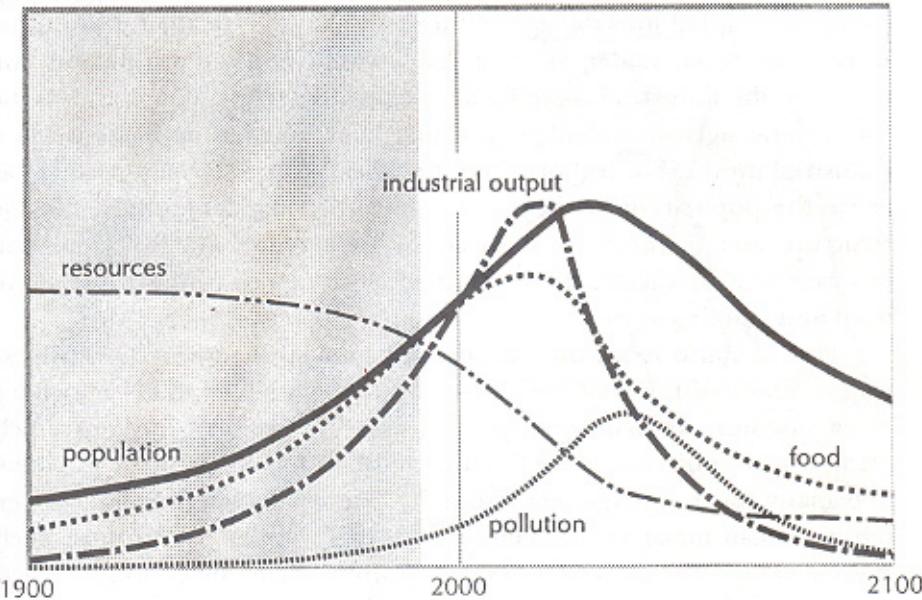
That was twenty years ago; the situation is surely more urgent today. But oil doesn't need to "run out" before the serious ramifications of energy descent are felt: The critical period will come (and may already be upon us) when demand begins to outstrip supply, signaled by clear and unmistakable price spikes. At that point, with the unpredictability de-stabilizing wary financial markets, weaknesses in the entire global economic structure will begin to reveal themselves; and then, one by one, all those tenuous connections that have been held in place by cheap oil will start to unravel.²⁵

Another useful graph, taken from the insightful analysis *Beyond the Limits: Confronting Global Collapse: Envisioning a Sustainable Future* (p. 133), reveals the terminal effects of resource depletion on other critical indicators. Resources here refer to more than just oil, but oil is the 'linchpin,' providing the economical means for discovery, extraction, transport, and processing of all other resources.

²⁵ I must admit that I am not at all a pessimist, for I see Peak Oil as a wonderful opportunity. The opportunity will be: reorganizing human society, at all scales and functions, in accord with timeless, ecological, nature-encoded, truly sustainable patterns – thus increasing and enhancing long-term quality of life for all. There will be no other choice except to make this kind of re-adjustment, for the Oil Age produced a very temporary, hyper-accelerated, unwieldy, unstable and unsustainable anomaly.

SCENARIO 1

State of the world



Scenario 1 above, is called The “Standard Run,” and represents the following situation: “The world society proceeds along its historical path as long as possible without major policy change. Population and industry output grow until a combination of environmental and natural resource constraints eliminate the capacity of the capital sector to sustain investment. Industrial capital begins to depreciate faster than the new investment can rebuild it. As it falls, food and health services also fall, decreasing life expectancy and raising the death rate” (p. 132).²⁶

This is a systems analysis because it deals with the necessarily interdependent relationships of key various indicators acting dynamically within an integrated and circumscribed whole. The ‘whole’ here is the “population-economy-environment system” – a materially ‘closed’ system *with definite*

²⁶ Of course, this book is a sequel to the enormously influential *The Limits to Growth: A Report for the Club of Rome* (1972). In both cases, the authors – Donella and Dennis Meadows, et al. – devised computer programs in which to simulate these trends. In this last book, they created other Scenarios in which various factors were adjusted; for example: instituting land erosion protection, or stable population and industrial output goals, all for the purpose of deliberate restraints on growth. With these adjustments, the world system responded with more gradual descents – though descents nonetheless – before finally stabilizing at more sustainable pre-industrial levels.

resource constraints. Because of the interdependent relationships of elements within the system, a change in one will effect change in all others, to varying degrees. In the real world, we cannot expect the availability of oil to decline while everything else remains the same: the effects of energy descent will reverberate throughout the system. The graph for Scenario 1 shows that even after resource use begins to fall, population, food and industrial output continue to rise – the recurring lag. But these other indicators *ultimately rely on resource availability* – “resources” including productive soils and potable water – and so at some point they too ‘peak,’ and then begin to fall precipitously.

Scenario 1 represents a system that goes into “overshoot and collapse.” Why overshoot and collapse?

“A population and economy are in overshoot mode when they are drawing resources or emitting pollutants at an unsustainable rate, but the stresses on the support system are not yet strong enough to reduce the rates of withdrawal or emission. Overshoot comes from delays in feedback – from the fact that decision makers in the system do not get, or believe, or act upon information that limits have been exceeded until long after they have been exceeded...Physical momentum causes delay not in the warning signals, but in the response to the signals. Because of the time it takes forests to grow, populations to age, pollutants to work their way through the ecosystem, polluted waters to clear, capital plants to depreciate, and people to be educated or retrained, the economic system can’t change overnight, even if it gets and acknowledges clear and timely signals that it should do so. To steer correctly, a system with inherent physical momentum needs to be looking decades ahead...The final contributor to overshoot is growth...Delays in feedback can be handled, as long as the system is not moving too fast to receive and respond to one signal before the next signal comes in. Constant acceleration will take any system to the point where it can’t respond in time...The faster the growth, the higher the overshoot, and the farther the fall (ibid, p. 137).

The inimical consequences of ‘growth’ have been a recurring sub-theme in this paper about Urban Villages. It’s been pointed out repeatedly, for example, that the debt-and-interest-based financial system of neo-capitalist economies

requires unending growth or it will collapse in upon itself; and so the dreaded fear of ‘recession’ means that players heavily invested in the system begin to lose ‘projected’ money. It stands to reason, then, that these influential players will do anything possible to prevent the slowing or cessation of growth – even to the point of denying or refusing to accept and act upon the implications of energy peak and descent. When the structure of a system rewards short-term personal gain at the expense of long-term health of the whole, predatory individualism is encouraged.

It would be a good idea to establish indubitably, once and for all, the direct causal relationship between the accelerating use of oil and the voluminous expansion of industrial civilization in the 20th century; because, correcting and rectifying the unwholesome effects of that relationship are at the heart of the Urban Village solution that will be proposed in the next section. To gain this kind of “causal” understanding we need to turn to the field of “Energetics.”

To begin with, here is a passage from Howard T. Odum (considered by many the worlds’ foremost theorist of energetic analysis), who developed the energy accounting technique of EMergy – “a scientific measure of real wealth in terms of the energy required to do the work of production” (Odum, 1996, p. 7):

“The availability of power sources determines the amount of work activity that can exist, and the control of these power flows determines the power in [human] affairs...We may say that phenomena on Earth are energetically determined” (Odum, 1971, p. 34)...[P]ower is needed in proportion to the amount of structure to be maintained...(ibid, p. 143)...[T]he demise of civilizations was accompanied by the loss of formerly concentrated power flows (ibid, p. 229).

Fair enough: energy is fundamental, both to physicists and to civilizations. Power is defined as “energy flow per unit time,” so the more energy there is flowing, the more work that can be accomplished. The exploitation of a new energy source will create a growth spurt but as complexity increases more power (energy flow per unit time) must be diverted just for maintenance. This is what

Tainter terms “a diminishing return on investment.”²⁷ Without renewed power flows to maintain previously established structure (think of Suburbia), societies become vulnerable to subsidence, and this is a process that has been repeated historically.²⁸

In his 1976 book, *Energy Basis for Man and Nature*, Odum explains:

“In the last century, the fantastic growth of the industrialized system, of agricultural yields, and of population was driven by the tapping of deposits and pools of accumulated energy...Humanity obtained a temporary, rapid increase in growth from diverting energy from the earth cycle to the cycle dominated by men (p. 128)... [T]he rich energy of coal and oil produced extremely rapid growth” (p. 163).

And then, in a very worthwhile treatise called *General Energetics: Energy in the Biosphere and Civilization* (1991), Vaclav Smil from the University of Manitoba refers to settlement scale:

“Intensification in energy subsidies in farming has been also the critical factor in the global rise of urbanization and its attendant high residential densities. Concentrated energy in fossil fuels opened the way for large-scale, centralized urban-based manufacturing, but the massive shift of rural labor to cities could get underway only with field machinery and fertilizers displacing

²⁷ In an article entitled “Complexity, Problem Solving, and Sustainable Societies,” Joseph Tainter educates: “As a society increases in complexity, it expands investments in such things as resource production, information processing, administration, and defense. The benefit/cost curve for these expenditures may at first increase favorably, as the most simple, general, and inexpensive solutions are adopted. Ultimately a growing society reaches a point where continued investment in complexity yields higher returns, but at a declining marginal rate...Two things make a society liable to collapse at this point. First, new emergencies impinge on a people who are investing in a strategy that yields less and less marginal return. As such a society becomes economically weakened it has fewer reserves with which to counter major adversities...Second, diminishing returns makes complexity less attractive and breeds disaffection. As taxes and other costs rise and there are fewer benefits at the local level, more and more people are attracted by the idea of being independent. The society “decomposes” as people pursue their immediate needs rather than the long-term goals of the leadership. As such a society evolves along the marginal return curve...it crosses a continuum of points...where costs are increasing, but the benefits have actually declined to those previously available at a lower level of complexity. This is a realm of negative returns to investment in complexity. A society at such a point would find that, upon collapsing, its return on investment in complexity would noticeably rise. A society in this condition is extremely vulnerable to collapse.” Tainter also reminds us: “Historical knowledge is essential to sustainability. No program to enhance sustainability can be considered practical if it does not incorporate such fundamental knowledge.” From www.dieoff.org/page134.htm This article is adapted from Tainter (1996) *Getting Down to Earth: Practical Applications of Ecological Economics..*

²⁸ See also Dale and Carter (1975) *Topsoil and Civilization.*

traditional animate exertion (p. 241)...[C]ities and conurbations with populations in the multi-millions could not have arisen without high energy densities of fossil fuels, portability of refined oil products, great convenience of natural gas, and superior flexibility of electricity" (p. 309, emphasis added).

This is what I perceive to be "the heart of the matter:" it was the nature and quality of refined oil itself, as an energy source with particular characteristics – highly concentrated, easily transportable, compact in storage, multifarious in its usage – that allowed "the population of the world [to increase] six-fold exactly in parallel with oil production" (Campbell, 2003). Extremely high urban densities simply could not – and in an energy descent future, will not – be sustained without ready availability of this inimitable energy source. There are a number of ways to look at this:

First, the Oil Age was an era of relentless *centralization*. The massive flows of 'energy per unit time' created power storages as never seen before. This power was consolidated individually – in the accounts of the hyper-wealthy; economically – in monopolization by trans-national mega-corporations; and structurally – in the intense built environments of 20th century cities.²⁹ Thus, it was the dense concentrated nature of the energy source itself that created dense concentrations of population, wealth and power. (Energy creates wealth and not vice versa.) Any conversion to energy sources of lesser density automatically will translate into a decrease in the possibilities for dense populations in urban environments. This is so because:

"Graphic comparison of power densities of various energy supply modes with those of final uses reveals a wealth of spatial implications. The most important conclusions concern the spatial consequences of the eventual transition from fossil fuels to solar civilization (Smil, p. 242)...Since consumption has been based largely on the supply of high power density fossil fuels, the future

²⁹ "Maximum residential densities of around 90,000 people per square kilometer [as in Hong Kong's Old Kowloon] translate...to anthropomass...roughly 200 times higher density than that of large herbivorous ungulates in Africa's richest ecosystems and 3-4 times larger biomass than in all bacteria and fungi in rich farming soils" (Smil, p. 241).

transition to arrangements dominated by low power density biospheric fluxes will require a major socio-economic transformation" (*ibid*, p. 243). As an example, "[g]eneration of the requisite electricity by renewable conversions would have space demands greatly surpassing today's claims of liquid fuels" (*ibid*, p. 244).

So once again, to emphasize: we're not simply going to replace oil with some other energy regime and then carry on as usual: *the transition will be accompanied by significant structural adjustments.*

Second, the exponential rise in global population was made possible only by the *oil-subsidized* surplus of food production. The world could not have produced enough food to go from feeding 1.5 billion people in 1900 to feeding over 6.0 billion people today without the abundant influx of cheap oil. Nonrenewable hydrocarbons are intrinsic to all aspects of the industrial agricultural process: as the base for pesticides and herbicides, in the operation of increasingly behemoth machinery, and, in the form of natural gas, as the nitrogen input for fertilizers. In many situations, the food is virtually grown on a sponge of oil, for the soils have become lifeless.

As an example of how alarmingly dependent industrial agriculture is on the oil subsidy, consider: "By the time the average calorie of food is produced in N. America, it takes 10 calories of fossil fuels. This doesn't include additional fossil fuel energy for packaging and transporting an average of 1200 miles" (Quinn, in McBay, 2005). It doesn't take a mathematician to figure out that these numbers indicate a widening net energy deficit. Coming down the back side of the oil availability curve, the profligately uneconomical - though highly centralizing - practices of industrial agriculture will not endure. During the inevitable transition to sustainable, smaller-scale, decentralized, organic agricultural methods, there undoubtedly will be a decrease in yields. With less food available to support the bulging populations in dense urban areas, many people will be compelled to reverse migration and move back to more rural (or

perhaps suburban?) locations. This migration will be encouraged and facilitated all the more because of the needs of a more *labor*-intensive organic agriculture replacing the oil- and machine-intensive industrial agriculture. Any way you look at it, the food equation points to further de-urbanization.

De-urbanization should prove to be a positive evolutionary development; after all, there were very real social and ‘human nature’ consequences arising from living in dense, crowded urban conditions:

“Clearly, when people had so packed themselves into finite spaces, the opportunities for mutually impeding each other’s movements and for otherwise interfering with each other’s lives had become significant. Little wonder that the intimate kind of social ties that used to characterize human life in an era of agrarian villages had given way to an urban “norm of disengagement.” Persons whom we physically encountered on streets, in subways, etc., evoked mainly the ability to stare past one another. Behaving toward each other as if persons were mere objects became a necessary defense mechanism because of the psychic overload imposed by urban circumstances...Aggravated by urbanism, population pressure was intensifying competitive aspects of human interaction” (Catton, pp. 206-7).³⁰

Indeed, these were “competitive aspects” that could be considered a *deviation* from human nature, as evidenced in the paleo-anthropological literature. The sociology of urbanism, then, is not so much a study of human nature *a priori* as it is a study of human nature under conditions of oppressive stress.

One more energetic analysis – this one suggesting a decline in *total* population (and thereby accompanying de-urbanization) during the transition from fossil-fuel civilization to a reduced-carbon, solar-powered future – centers on the proposal of making “thermodynamics” the rational basis of “economics:”

“Georgescu-Roegen (1971) was the most passionate proponent of this radical shift. He called the second law of thermodynamics “the most economic of all physical laws” and argued that civilization’s foremost goal should be to minimize entropic degradations. This led him to formulate the fourth law of thermodynamics – “In a

³⁰ See also Morris (1969) *The Human Zoo*.

closed system the material entropy must ultimately reach a maximum" – whose consequence is the elevation of accessible low entropy materials to "the most critical element from the bioeconomic viewpoint." The post fossil-fuel world will have the same share of solar energy – but not the same access to low-entropy materials.

Inevitably, this leads to a rejection of steady-state civilization (Daly, 1973), a concept promoted in response to concerns about continuation of growth (Meadows, et al., 1972). Such a civilization implies no clear limits on global population and standard of living, while the only thermodynamically acceptable population total is the one supportable by organic agriculture alone, a goal implying sizable reduction of the late-twentieth-century numbers. The most desirable prospect is thus not a steady [state] society but a declining one.

Of course, Georgescu-Roegen is quite correct in principle. Unless our species eventually leaves the planet, the only possible strategy to maximize the duration of its terrestrial tenure is to minimize the entropic drift, a strategy that may require a gradually declining population in order to channel the finite amount of usable solar radiation into increasingly more energy-intensive procurements of materials" (Smil, p. 266).

It's quite profound, contemplating all the possible reduced-carbon, energy-descent futures. These sure are interesting times we're living in. One conclusion seems certain: the world is on the verge of a transformation of unparalleled proportions. Unfortunately, much of the dialogue on the Internet around this theme is full of "gloom and doom" predictions about a spectacular crash that will hurtle us back into the Dark Ages, or even worse, into a new Stone Age. There are warnings about the outbreak of violence and looting, the spread of infectious diseases, total breakdown, anarchy, chaos.

While there is certainly cause for concern and impetus for action – especially since there are environmental degradations and fluctuations occurring simultaneously with the energy transition – I prefer a more moderate, tempered stance. "Overshoot and collapse" need not foretell total disaster; indeed, the effects likely will be felt texturally, with some regions or locales and individuals

experiencing breakdown while others experience a resurgence of opportunities. People will be on the ‘edge’ for awhile, yet the edge is where creative novelty emerges. Awareness is essential and preparation is key. A concomitant leap in consciousness could very well be forthcoming for the species *Homo sapiens sapiens*.

Based on some of the considerations introduced in this chapter, especially as they may pertain to the emerging concept of Urban Village, here is a summary of some of the ventured speculations:

- The “population-economy-environment” system will have no choice but to contract and disperse. This means that what was experienced as inexorable centralization on the upstart of the energy availability curve will shift into a decentralizing momentum on the back side - *guaranteed*.
- All aspects of the global system will be affected. The so-called “global economy,” held together by the vast supply lines and transportation networks that cheap oil made possible, will unravel and dis-integrate. As this happens, the mega-corporations that have been controlling our economic agenda will dissolve, unable to maintain their power projection. As an organizational unit, the ‘nation-state’ will become archaic.
- A resumption of local and regional production will be pronounced. The terms “re-localization” and “bioregionalism” will become the post-globalization re-organization principles. Those locales and regions which still have some form of functioning self-reliant economic networks in place will experience the most painless transition to a post-fossil fuel era.
- In accord with the above proposition, recently colonized parts of the world (i.e. those lacking any sort of village-based substratum) will have the most difficult time of adjustment. For them, the coming period could not even be called *re-adjustment* because these colonized regions will be constituting sustainable settlement patterns completely from scratch.

- The territory presently called the USA, for example, awaits a massive retrofit; for not only is it lacking a village-based substratum, the infrastructure that *was* built – 80% of it in the oil-boom since WWII – will prove to be completely dysfunctional. The suburban settlement pattern in particular (what Kunstler describes as “the greatest misallocation of resources in the history of the world”), will need to be revamped beyond recognition – thus *The End of Suburbia*.
- Industrialized areas throughout the world, most of them densely urban, will need to re-introduce primary production capacities in order to foster measures of self-reliance. Similarly, rural areas will need to introduce light industrial capacity into their base as they re-configure into diversified, self-reliant nodes. Wilderness areas will become increasingly inaccessible, resulting in a recovery of wildlife and planetary evolutionary capability.
- In all these scenarios, the concept of Urban Village, as defined in these pages, will prove to be the most viable of retrofit strategies.

I know many people have been thinking that all this retrofit business will not be necessary, that some form of new energy source will be discovered or invented to replace oil. Tops on this list are nuclear, hydrogen fuel cells, ethanol, or fusion. To this argument I would insist: *do the research*, because it’s not going to work that way.³¹ No combination of replacement energy sources can possibly replace oil’s unique characteristics: its concentrated density (as in joules/liter), its transportability, storageability, and adaptability. Oil was a one-time energy

³¹ For a comprehensive analysis see: www.energybulletin.net In summary: Nuclear, besides being another undesirable way to centralize energy production, is prohibitively dangerous; and besides, uranium is another nonrenewable resource with known deposits expected to last just another 30-50 years. Hydrogen fuel cells, though certainly having a role in a sustainable energy regime, are an energy *storage* technology, not an energy *production* technology. Currently, natural gas is the preferred energy source for converting hydrogen into a usable fuel, though renewable sources are possible. Ethanol? Research shows that it takes more energy to produce the ethanol than the ethanol provides in return! And fusion, well, there already exists a perfectly functioning nuclear fusion reactor – *the Sun*.

bonanza, a very short-term blip against the larger backdrop of the recurring human drama. Life after oil will be very different than life during oil.³²

The only long-term viable solution, as hinted at previously, is to begin transitioning now to a sustainable, solar-based “population-economy-environment” system. This is the basis for an “ecological economics,” an economics based on thermodynamic calculations. The Sun is ultimately the primary energy source for all other energy “transformities,”³³ including oil on a geological scale; therefore the Sun is ultimately the source of a sustainable socio-economic order. “[W]e will find that the long-term basis of our economy is ultimately the use of effective self-organizing solar converters: forests, ecosystems, and low-energy agricultural patterns that have long been with us” (Odum, 1976, p.9). This is the basis of the perennially sustainable, traditional village socio-economic order: optimizing the initial solar influx so as to maximize energy flow per unit time. Obviously, the kinds of knowledge, social arrangements, and settlement patterning required to thrive in a solar economy are very different from those required in an oil economy.

And now, going back to the original question: What does all this mean for the various New Urbanist and Urban Village conceptualizations that have been reviewed up till now? One observation rings startlingly clear: none of our visionaries mentioned, nor even seemed to be aware of, the impending consequences of Peak Oil: the trump card. Peak Oil is the trump card because

³² Or, says Richard Heinberg, in his influential book *Powerdown: Options and Actions for a Post-Carbon World* (2004): “I described the 20th century as the Petroleum Century, a one-time special event in human history. During this spectacular period, total global commercial energy production increased by about 9 times, and efficiency gains doubled that figure in terms of utilized energy, yielding an overall 18-fold rise in energy available to human beings. It was this energy windfall that enabled us to transform our way of life from oxcarts and Pony Express messengers to jetliners and cell phones. Meanwhile the human population quadrupled during the “century of progress” to take advantage of its unprecedented energy subsidy” (p. 9).

³³ “The universe is hierarchically organized and represents a manifestation of energy. Transformity is a measure of the hierarchy and is apparently applicable to all quantities of matter, energy, or information. Transformities have as many orders of magnitude as there are energy levels in the universe” (Odum, 1996, p. 18).

ultimately the viability of all revisionary schemes will be validated upon their functionality within an energy-descent scenario. According to this criterion, those revisionary schemes that require inordinate energy inputs for their implementation and maintenance will no longer be practical. This puts the New Urbanism, as generally practiced, in serious question. Likewise, all those revisions or renovations producing little more than “mixed-use consumer enclaves” – with affluent people blithely going about from up-scale condominiums to shops to restaurants to recreation and back again, *without ever producing anything* – will be recognized as conspicuous consumption energy drains, and indefensible in a reduced carbon future.

Clearly, some more thought needs to be put into these well-meaning strategies if they are going to become viable working models of sustainability for the 21st century, instead of just partial steps in that direction. To that purpose we now turn to the task of formulating a vision of Urban Village in the true spirit of Ekistics – the scientific, multi-disciplinary study of human settlements. To prelude that purpose, here’s an appropriate closing to this chapter: the final paragraph from *Environmental Accounting: EMERGY and Environmental Decision Making*:

“The world’s rate of fuel consumption has apparently reached its maximum, and the renewable resources available are decreasing each year due to population increase and environmental encroachment. On a [full environmental accounting] basis the world’s standard of living is already coming down. Already there are erratic contractions, arbitrary downsizings, and population-resource disasters. Much uncertainty and malaise can be avoided if [full environmental accounting] evaluations can be substituted for economic evaluation. If people can regain their commonsense view of real wealth, which EMERGY evaluation gives them, policies can be implemented for selective, slow, and deliberate, and prosperous descent” (Odum, 1996, p. 287)

Odum calls this a “Prosperous Way Down.”

The Urban Village: Synergy of Ecology and Urbanism

There now has been enough information presented to begin formulating a version of Urban Village uniquely adapted to the conditions of our times. In particular, this version will be proposed as the fundamental retrofit solution for the urban pattern *in a period of energy descent*. The Urban Village thus proposed will be considered a sustainable ‘unit’ of human settlement in a theoretical Ekistics for the 21st century. As a theoretical construct, the outlines of an ideal, archetypal form will be drawn, while actual manifestations will vary.

As a sustainable unit, or ‘unity,’ the Urban Village will strive for integral self-reliance; that is, just as in the traditional village, efforts will be made to have all primary essential needs originating from and provided for entirely within that habitation system. By “primary essential needs” we mean the basic necessities of life: food, water, shelter, energy for cooking and heating, as well as such non-tangibles as meaningful work, healthy social interaction, and relationship with a higher power. This is fundamental Human Ecology.

It would be utilitarian to add to “primary essential needs” such basic accoutrements as clothing (a form of shelter), tools and utensils, storage containers and hardware. All these are artifacts that a human collectivity uses to get on with the business of daily living, so why shouldn’t they be produced locally? That way, they can be made with materials from the surrounding environment, by the same group of people who are going to be the users.

Just for reference, in the densely packed urban centers of today, city dwellers are *completely dependent* on distant production and distribution for the input of energy and materials necessary for basic maintenance – even for such essential needs as food and water. In the influential “Ecological Footprint” work of Wackernagel and Rees (1996, p. 91), for example, it was calculated that the city

of London requires an area *120 times the size of itself* to meet its environmental needs. Such gross overextension, commandeering the resources of distant hinterlands, has been made possible only with the ready availability of cheap, nonrenewable fossil fuel energy. What happens when the transportation and supply lines are no longer able to service such a vast, global-wide network? Then the crowded inhabitants of London (or Hong Kong, Lagos, Djakarta, New York, Mexico City, Tokyo, etc.) are going to be in a very vulnerable position. Therefore, the Urban Village, as a retrofit solution, begins to shape and mold the structures, patterns, and processes of the prevailing urban form into a diversity of more self-reliant, self-contained, sustainable communities – human-scale unities – thus drastically reducing “ecological footprints” in a wave of re-localization.

‘Self-reliance’ is not the same intention as ‘self-sufficiency;’ striving for self-sufficiency (as in an imagined ‘closed’ system) within the urban pattern would be pointless, for there are countless measures of interdependence. Self-reliance (as a function of a self-contained unity) simply implies the potential to get along by oneself, if need be, irregardless of fluctuations in the external environment. In the projected case scenario, as the global economy begins its dis-integration and dispersal, the Urban Village will be designed to maintain its organization as a coherent, autonomous ‘whole’ – to meet its essential needs internally, not relying on external inputs. Now *that* would be true sustainability, in the sense of “being able to be continued into the indefinite future” (Context Institute, 1991). Obviously, this interpretation is meant to ensure basic level ‘survivability,’ and in many cases it may come to that (unfortunately, for far too many people, it already has). Of course, in a hierarchy of needs, it is the cooperative, mutually-beneficial interdependence with surrounding systems that facilitates conditions more aptly termed ‘thrive-ability’ – enhanced quality of life and ever greater possibilities. However, in the inevitable ‘radical’ restructuring implied in conditions of energy descent, we ought to be aiming for survivability

first.³⁴ The sustainable Urban Village is a self-organizing, self-maintaining, autonomous whole but cannot exist in isolation.

The formation being proposed here is coming from a “systems” perspective (a perspective sometimes referred to as “holistic,” “ecological,” or “integrative”). Since a system is “a group of interacting, interrelated, interdependent components that form a complex and unified whole” (Pegasus Communications, 2006), then “Urban Village” is being conceived holistically as a ‘meta-system’ composed of numerous integral ‘sub-systems,’ as well as a sub-system in its own right integrated within larger ‘supra-systems.’ As was discussed in the chapter “What is a Village?” the optimum population for these village-scale meta-systems is 5000 persons.³⁵

The subsystems of the Urban Village – just like organs in a body – are those necessary interdependent elements that contribute to maintaining its coherency as a self-reliant, unified whole. These village subsystems could be labeled: energy, food (including agriculture, horticulture, aquaculture, agro-forestry, and animal husbandry), water, waste and waste recycling, residence, governance, commerce, communication, industry, recreation, education, etc. (This is profligate “mixed-use!”) All these ‘village organs’ are ‘systems’ in their own right – integrated ‘wholes’ requiring their own levels of definition, organization, and management – yet when they are synergistically designed together into purposeful, mutually-supportive interrelationship at settlement scale, they become subsystems within the larger whole – the Urban Village.

³⁴ ‘Radical’ is derived from the root word *radix*, meaning ‘root.’

³⁵ In the systems-oriented *A Pattern Language*, Christopher Alexander calls Pattern 12 “Community of 7000,” and says “Individuals have no effective voice in any community of more than 5000-10,000 persons (p. 71)... Therefore: Decentralize city governments in a way that gives local control to communities of 5000-10,000 persons... Give each community the power to initiate, decide, and execute the affairs that concern it closely” (pp. 73-4). Krier adds, each urban quarter “ought not to exceed a total of 10,000 inhabitants” (p. 128). In a period of energy descent, I think it would be prudent to design for the lower end of this spectrum. Remember that the definitive UK Urban Villages Forum Briefing Sheet recommends a “population 3,000 – 5,000 – large enough to support [a] range of activities and facilities” yet “small enough to enable people to recognise each other and to encourage neighbourliness.” This 5000 person optimum was the upper range traditional villages reached before spontaneously performing an act of ‘mitosis’ in relocating a new settlement center.

The ‘supra-systems’ are those more-inclusive contextual arrangements in which individual Urban Villages appear as contributing elements. These include: the greater city, the city’s metropolitan region, the built environment’s encompassing ecosystem(s) and the ecosystem’s greater bioregion – all these leading up to continental and global scale “population-economy-environment” systems. Each Urban Village, as a basic structural component to these more-inclusive systems, draws its situational circumstances from them, and, in return, influences their overall health and vitality.

And so, the systems perspective has the benefit of conceptually organizing all the contributing elements of the sustainable Urban Village not only *in relationship* to one another but also *in relationship* to the greater contexts in which they appear. By focusing on *relationships*, the systems perspective overcomes the stark conceptual limitations of the guiding epistemology of scientific industrial rationalism, which influenced the highly unsustainable social and settlement patterning of today. That technocratic way of thinking – in which elements were conceived atomistically, reductionistically, mechanistically, as independent units in isolation – led to piecemeal, scattered development and segregated single-use zoning. These are incoherent arrangements that require inordinate amounts of energy for their upkeep and maintenance. As a unified whole, as the synergy of ecology and urbanism, the sustainable Urban Village could never be realized by any partial or random assembly of elements lacking meaningful interrelationship.

This is such an important (if somewhat implicit up till now) aspect of the ideas being developed in this paper – that a change in outlook, values, perception, *consciousness*, precedes the quest for truly sustainable solutions. We might even go so far as to say that it’s not enough any longer to speak in terms of generic ‘sustainability;’ for the time has already passed to comfortably conceptualize within the realm of steady-state solutions, as if we could somehow maintain conditions at the energy plateau indefinitely in the transition to some

sort of “green-tech stability” (Holmgren, 2003). The time has come to speak in terms of *beyond sustainability*, beyond mere steady-state maintenance, to conditions of healing, regeneration and renewal (see Lyle, 1996, *Regenerative Design for Sustainable Development*). From this perspective, the so-called “mixed-use” consumer enclaves that call themselves “Urban Villages” become gimmicks, mere passing fads, because they are only scratching the surface. The long-term solution lies with coming to terms, at a very thorough fundamental level, with this profound proposed synergy of ecology and urbanism:

“Only a global, philosophical, technical, cultural, moral, economic and aesthetic vision can enable us to influence the imperatives that shape the natural and cultural environment. The authority and legitimacy of architecture and urbanism can be regained today only if they *seek solutions within an ecological context*...The realisation of ecological urbanism, agriculture and industry represents a challenging task for industrial civilisation. Over the past two centuries, technical changes have overwhelmed the customs and structures of civil society. The ecological ethics that are now burgeoning are profoundly changing industrial, technological and social imperatives. Today, a great deal of energy and imagination is devoted to producing so-called “ecological” buildings, tools and consumer goods. But such praiseworthy enterprises often distract the general public’s attention from *the main aim of ecology, which is, of necessity, contextual*” (Krier, p. 90, emphasis added).

And what is the ultimate context within which ecological urbanism finds itself? It must be the living, breathing *biosphere*, sub-organized into bioregions, ecoregions, and ecosystems. “Development will be sustainable only to the extent that it works with the natural life-enhancing cycles of the biosphere” (Canfield, in Aberley, 1994, p. 87). “Ecological planning means, at its core, gearing human activity to the natural limits set by environmental processes and structures” (Pearse, *ibid*, p. 115). Furthermore, “[e]codevelopment means that development must first of all plan to meet the *basic needs* of all the people before it pays attention to the *wants* of the privileged sectors of society. It must aim...at developing local *self-reliance*, the ability of a community to survive on its own

resources. Both of these goals must be achieved without disruption of the *ecological support base* on which the future of the community will depend" (Dassman, *ibid*, p. 40).

As we have seen, many New Urbanist and Urban Village theorists speak intuitively about integrating urbanism with ecology, but few seem willing to go so far as to recognize the primacy of the ecological support base in this equation:

"In many ways, ecology and community design are in contradiction. Most designs for development inevitably require the destruction of natural ecologies...There are solutions to this paradox. Designers can create communities that have less impact on the natural environment and are practical alternatives to conventional community design.

Unfortunately, in North America, architectural and planning theorists, not practitioners, develop most ecology and community design concepts. While these works confirm the need for an alternative approach to design, the solutions put forward often are highly theoretical, and do not address practical concerns. Although many architects and planners profess an interest in both ecology and community design, there are virtually no contemporary built examples of "ecological communities" in North America" (Saunders, in Roseland 1997, p. 113).³⁶

This phenomenon – lots of great ideas but a paucity of working models on the ground (even in 2007) – must exist for a few reasons: 1) conventional education in architecture and planning lacks the broad transdisciplinarity that would enable theorists to fully appreciate the implementations of their proposals; 2) financially prosperous careers are not made at the pioneering edge but rather are secured within the comfortable limits of sequential progress defined by the status quo; and 3) with "peak oil" still on the horizon, there has not yet been felt the immediacy or urgency at the policy-maker level to fully realize authentic

³⁶ Saunders goes on to add: "Northern Europe, in contrast, supports a long tradition and ever-expanding practice of ecological community design, with a large palette of academic and practical research to draw upon" (*ibid*). Confirms Beatley (2000): "One of the clearest conclusions is that, compared to many of the European initiatives profiled, there is simply not enough attention given in the United States to aggressively promoting ecological design and building. The northern Europeans especially have made major national commitments to advancing ecological building, often with substantial and creative financial underwriting and through other important forms of national (and municipal) leadership" (p. 313).

ecological communities. Fortunately, and most likely a symptom of the shift in values and perception mentioned above, there have been some “pioneer species” willing to take that extra step to get some authentic ecological community models happening on the ground.³⁷ Saunders continues:

“These researchers and designers of ecological communities, who look for new ways to integrate artificial [human made] environments with natural environments, *study human settlements as ecosystems*. Viewed as ecosystems, human settlements should be energy efficient, produce little waste, and be self-reliant – much the same as ecosystems appearing in nature...In sum, ecological communities are designed to imitate the efficiency in nature, where there is a balance of inputs and outputs of energies, products, and waste. And, ideally, the surplus of these materials is still valuable to the community” (*ibid*, p.114, emphasis added).

Here then is the key, the decisive distinction between designs for sustainable communities which merely add ‘ecological’ features, in an attempt to appear ecological, with those who are *truly* ecological, and thus truly sustainable: these designs mimic natural ecosystems. Therefore, accentuating the valuable work of Janine Benyus in *Biomimicry: Innovation Inspired by Nature* (2002), which includes chapters devoted to describing such phenomena as “Growing Food Like a Prairie,” Gathering Energy Like a Leaf,” and “Weaving Fibers Like a Spider,” we are proposing that sustainable – or better yet *regenerative* – Urban Villages will be designed as ecosystems. “The ecosystem level is the logical level around which to organize theory and practice in ecology because it is the lowest level in the ecological hierarchy...that is complete – that is, has all the components

³⁷ The “ecovillage” movement, in particular, is the vanguard in this effort to implement authentic sustainable community models. (See <http://gen.ecovillage.org/>). The Global Ecovillage Network has recently launched an educational initiative called Gaia Education which has produced a curriculum that has been endorsed by UNITAR as an official contribution to the UN’s Decade of Education for Sustainable Development, 2005-2014. (See www.gaiaeducation.org).

necessary for function and survival over the long term" (E. P. Odum, 1997, p. 43).³⁸

There is enough potential material to fill another whole paper enumerating all the various details of a 'village as ecosystem' design, which is beyond the scope of the present work.³⁹ There are, however, some important considerations worth mentioning here:

First, as quantified in the EMERGY work of H. T. Odum, an ecosystem is a 'solar power converter' – the initial solar input is converted by chloroplasts into carbohydrates and stored as biomass; all other energy transformities are derivative of this first conversion. ""Primary production" refers to energy fixed by plants (Weigert, p. 224)...Primary production is an important aspect of ecological energetics both because it is the foundation or first level in the trophic energy-flow model and because it constitutes, literally, the bulk of the energy transformation that occurs in community ecosystems" (*ibid*, p. 206). Net primary production, based on thermodynamic efficiency, is the foundation of an ecological economics. At village-scale, this means an endogenous economy based on the intelligent storage and use of solar power in the primary production industries of renewable agriculture, horticulture, aquaculture, forestry and agroforestry.⁴⁰ An ecological economics does not preclude advanced, solar-powered information and communication technologies, so it is not a regression. Therefore, and especially when considering retrofit solutions in a reduced-carbon future, the regenerative Urban Village will be designed essentially as a solar power converter.

Also, as ecological 'systems,' ecosystems have definite boundaries. The adjoining boundaries between neighboring ecosystems are called 'ecotones.' "An

³⁸ "The *ecosystem* may be formally defined as the system composed of physical – chemical – biological processes active within a space-time unit of any magnitude, i.e., the biotic community *plus* its abiotic environment" (H. T. Odum and R. C. Pinkerton, in Weigert, 1976, p. 56).

³⁹ A textbook is proposed: *Fundamentals of Village Design* © Village Design Institute.

⁴⁰ For a quantitative analysis, see: Taylor and Adelman (1996) *Village Economies: The Design, Estimation, and Use of Villagewide Economic Models*. The authors present a general framework for modeling village economies based on computable general-equilibrium techniques.

ecotone is not simply a boundary or an edge; the concept assumes the existence of active interaction between two or more ecosystems (or patches of ecosystems), which results in the ecotones having properties that do not exist in either of the adjacent ecosystems" (Decamps and Naiman, 1990, as quoted in E. P. Odum, 1997, p. 54). Therefore, ecotones – areas rich in productivity and diversity – will be designed as edges between neighboring Urban Villages. These ecotones will be the wildlife and riparian corridors, agriculture and agroforestry zones, that are interwoven right through the urban fabric.

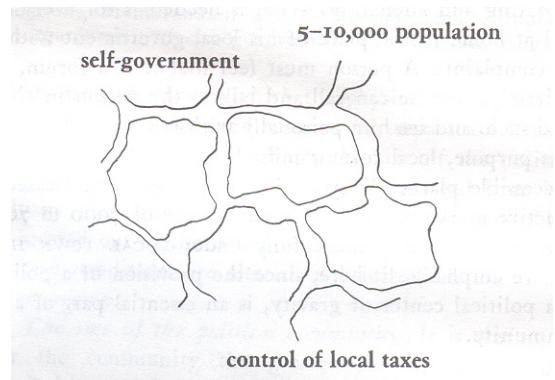
Additionally, ecosystems have a tendency to self-organize in an evolution of successions to an eventual 'climax stage.' Design and management considerations vary at different stages in the succession. During early phases of growth and development, dynamic conditions far from equilibrium are encouraged as the system creatively diversifies in periodic power surges.⁴¹ "[T]he evolution of an ecosystem [is] a process of information accumulation...The environmental information gained by the system is subsequently applied to the acquisition of higher autonomy (Jantsch, 1980, p. 142)...In mature ecosystems the fluctuations arriving from the outside...become increasingly damped...[as] the endogenous rhythm of the system unfolds to an increasing extent. A mature ecosystem...incorporates a very fine order" (*ibid*, p. 147). In the climax stage, the ecosystem moves to more of a steady-state condition, where most of the incoming energy is consumed in ordinary maintenance. All of the above could be said as well of the Urban Village designed as a constructed ecosystem.

Truly, the transition to regenerative culture will be accompanied by a shift in the use of metaphors away from mechanistic imagery – as in Le Corbusier's infamous "the city is a machine for living" – to ecological and biological imagery

⁴¹ "[Natural systems] perform at an optimum efficiency for maximum power output, which is always less than the maximum efficiency. In fact, it will be found that in order to operate at maximum power, the efficiency may never exceed 50% of the ideal "reversible" efficiency" (Odum and Pinkerton, in Weigert, 1976, p. 39).

- as in "the city is a landscape of urban ecosystems." The subsystems of the Urban Village, in one metaphor, were already portrayed as "organs in a body" in order to highlight their organic (organismic) interdependence. On a more primordial level, ecosystems, organisms, and organs are all composed of colonies of 'eukaryotic cells' - the basic 'building blocks' of life. What would it look like, then, to use the metaphor of the living 'cell' when introducing a systems-oriented pattern of regenerative Urban Village design?⁴²

What is being envisioned here is nothing less than the organic restructuring of the entire, presently discombobulated, urban fabric into a *cellular* assemblage of self-contained, self-maintaining, yet metabolically interfacing unities. Each Urban Village, then, could be conceived as a living 'cell' within the greater urban metropolitan 'tissue':



from Alexander, 1977, p. 74

⁴² "Consider a two billion year old life form: a single blue-green algae cell. As large and complex as Los Angeles is, it is less complex and evolved ecologically than this microscopic algae cell, an early building block of planetary sustainability that has been around for two billion years. Each cell is whole and complete, carrying a blueprint for its own growth and evolution. Each cell synthesizes its food from sunlight and the nutrients in water. It exchanges wastes with the surrounding environment, without polluting it. As we move up the chain of life into greater complexity, we find the same organic unity, whether it be a leaf, plant, or animal.

Vast cities are a short term aberration based on fossil fuels. We can make them more efficient, in terms of land and energy use, but in many ways this simply prolongs the destruction of global natural systems that are enslaved to the service of urban consumers. The size and design of a truly sustainable city must be ecologically balanced with water supply, waste purification, and basic food and raw materials production. What models can we learn from in designing new urban ecologies? The oldest and best is the garden, stable, and well-husbanded agricultural landscape...The garden and traditional small scale agriculture represent a middle ground, a transformation of nature to human ends in a way that both people and nature are enhanced. In our search for solutions, we cannot do better than that" (Van der Ryn, in Walter et al., 1992, pp. 68-9).

As the simulacrum of a living cell, each Urban Village will have a well-defined center and a well-defined boundary, and will be composed of numerous ‘organelles’ that contribute to its ongoing maintenance (see subsystems above). Just as there are specialized cells within a tissue, urban village cells can perform specialized functions as interdependencies within the encompassing urban fabric, depending on their favorable relative positioning or endowments. Some villages could be devoted to different kinds of industry or manufacturing (each village producing a different commodity to be traded within the region),⁴³ some to agriculture or other forms of primary production, and still others could specialize in communications, administrations, various entertainments, higher education, research, or perhaps trade with neighboring cities.

In this organic cellular arrangement, the potential also exists for broadly multicultural diversity within the Urban Villages – each village embodying and nurturing a rich, unique culture of its own. These unique cultures need not be based solely on ethnicity; for there could be a village of artists, another devoted to scholars, and still another primarily of Buddhists – *or whatever*. In this diversified, polycultural arrangement, individuals may be free to choose the culture(s) they wish to identify with. This vital human propensity to gather together with people of like-mind, as a function intrinsic to dwelling in a ‘place,’ is described quite well by Alexander:

“In the heterogeneous city, people are mixed together, irrespective of their lifestyle or culture. This seems rich. Actually it dampens all significant variety, arrests most of the possibilities for differentiation, and encourages conformity. It tends to reduce all lifestyles to a common denominator [monoculture]. What appears heterogeneous turns out to be homogeneous and dull...In a city made of a large number of subcultures relatively small in size, each occupying an identifiable place and separated from other subcultures by a boundary of nonresidential land, new ways of life can develop. People can choose the kind of subculture they wish to

⁴³ The efficacy of village-scale manufacturing enterprises within population groups of 5000 has been amply demonstrated by the Mondragon cooperatives of Basque, Spain. See Whyte and Whyte (1991) *Making Mondragon*.

live in, and can still experience many ways of life different from their own. Since each environment fosters mutual support and a strong sense of shared values, individuals can grow" (1977, p. 44, Pattern 8: Mosaic of Subcultures).

We could imagine that within the diverse Urban Villages, supported in their unique identities, endemic forms of cultural expression could emerge. Just as in traditional villages, idiosyncratic variations in dress, speech, customs or mannerisms could be distinguishable as characteristic of particular urban village communities.

Even with specialized functions serving the greater city or metropolitan region, each Urban Village of 5000 still incorporates all the necessary elements (subsystems or organelles) it needs to maintain its organization as a self-reliant, autonomous whole in its own right – just as living cells do. The important distinction being made here is the transference of sovereignty, governance, and self-direction from the abstract, amorphous, unaccountable scale of the ‘city’ to the very human and accountable scale of the ‘village.’ Instead of having one singular, densely packed, highly centralized urban core exercising dominion over an entire metropolitan region, while dispersing into an indeterminable morass of forms and functions lacking any coherent organization, that region is decentralized into numerous self-directed, decentralized, village-scale nodes; and since these are *Urban Villages*, each one of these nodes will have a vibrant urban-like center of its own.⁴⁴

The ekistic-minded urban theorist Leon Krier offers some valuable recommendations as to the structural arrangement of these nodes, which he terms “urban quarters:” “[the] foundational building block of the polycentric city is the autonomous urban quarter, a true city within a city” (1998, p. 124). In this

⁴⁴ Writes Mumford: “Now all organic phenomena have limits of growth and extension, which are set by their very need to remain self-sustaining and self-directing: they can grow at the expense of their neighbors only by losing the very facilities that their neighbors’ activities contribute to their own life. Small primitive communities accepted these limitations and this dynamic balance, just as natural ecological communities register them” (1961, p. 52).

regard, characteristics of the “urban quarter” can apply equally well to the conception of “Urban Village” – as a synergy of ecology and urbanism – being forwarded here:

“The first objective of ecological urban development must be to significantly reduce the number of miles traveled per person per day between workplace, home, school, shops and leisure activities...In this optic, the size of a quarter is defined by the daily pedestrian capacity, for the pedestrian must have access to all the usual daily and weekly urban functions within ten minutes’ walking distance, without recourse to transport. The area thus covered has a diameter of 500 to 600m and an area of some 80 acres (30-40 ha)...An urban quarter should be rounded in shape and should not sprawl...It should never extend more than 900m in any direction” (p. 128).

Five-thousand people on 80 acres gives a density of 62.5 persons/acre, rather compact by suburban standards, but not nearly as crowded as the 90,000 people/square kilometer measured in portions of fossil-fueled Hong Kong. Compare the density of Krier’s formulation with an analysis from Mumford:

“Probably the normal size of an early city was close to what we would now call a neighborhood unit: five thousand souls or less. So at the beginning of differentiated urban association, the city still retained the intimacies and solidarities of the primary community...Frankfort, digging in Ur, Eshnunna, and Khafaje, which flourished about 2000 B.C., found that the houses numbered about twenty to the acre, which gave a density, he calculated, of from 120 to 200 people per acre” (1961, p. 62).

Even at the low end of this scale, 120 people per acre in the first cities is double the population density proposed for 21st century Urban Villages. This means double the space available for ecological functions such as greenspace corridors and agricultural belts in the ecotones. Ecological functions within the total urban village habitation system are further enhanced if the suggested optimum of 5000 is concentrated in the urban core, or quarter, with a ‘first city’ density of 120 souls per acre. One-hundred twenty persons per acre times 40 acres equals 4800 –

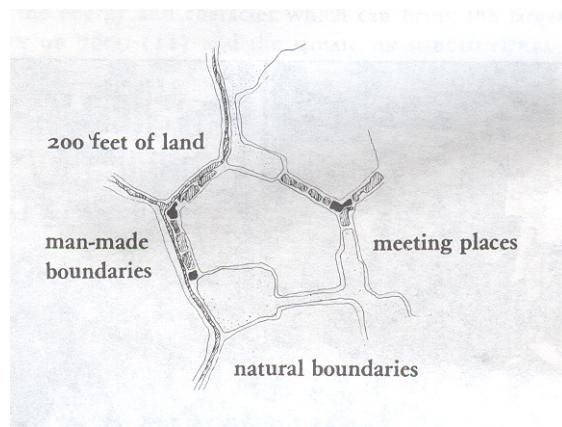
right about the optimum population size for the Urban Village, which leaves half left over from the 80 acre total for ecological functions along the edge.

Krier has some more to say about the “structure and form of the urban quarter:”

“The surface area of urban blocks decreases toward the centre and is larger near the perimeter of a quarter, thus creating a denser street network around the central square to generate a feeling of centrality and transparency by increasing the number of street corners, shop frontages, entrance doors, openings, etc...Each quarter has at least one central square and one high street which forms the backbone of a network of streets and squares...The boundary of a quarter is not a mere administrative line. It is a constituent of the urban fabric: a boulevard, an avenue, a parkway, a park, a promenade that articulates natural or man-made topographical features such as a river, lake, canal, stream, forest, natural incline, motorway, or railway” (p. 129).

Of course, biological cells have an intricately-defined, circumscribed, relatively densely packed (urban) nucleus that provides a focal point for the circumference of the semi-permeable cellular membrane – the cellular ‘wall’ that forms a well-defined boundary between the inner workings of the cell and its outer environment; thus, Krier’s morphology is based on natural formative principles. Alexander further accentuates this cellular isomorphism, the antithesis of sprawl, in Pattern 13: Subculture Boundary:

“The mosaic of subcultures requires that hundreds of different cultures live, in their own way, at full intensity, next door to one another. But subcultures have their own ecology. They can only live at full intensity, unhampered by their neighbors, if they are physically separated by physical boundaries (p. 76)...Therefore: Separate neighboring subcultures with a swath of land at least 200 feet wide. Let this boundary be natural – wilderness, farmland, water – or man-made – railroads, major roads, parks, schools, some housing. Along the seam between two subcultures, build meeting places, shared functions, touching each community” (pp. 78-9).



from Alexander, 1977, p. 79

The space within the 5000 person total urban village habitation system should be further differentiated socially and functionally along topographic lines. Differentiation provides extra detail and diversification, and thus increased information, which can lead to more efficient self-organization and management. Once again taking the eukaryotic cell as the sustainable model to emulate, we find metaphoric language that can be applied to the sustainable Urban Village:

"Endomembranous Network: There is an internal network of membranes in the eukaryotic cell that compartmentalizes the cell, providing districts and quarters for specific organelles and their functions. This partitioning allows space for distinctly different chemical conditions to occur simultaneously throughout the cell as required by each organelle and its specific metabolic function.⁴⁵ This network of membranes vastly expands the metabolic potential of the cell by greatly increasing its total surface area...Three organelles intimately involved with the endomembrane are the ribosomes, the endoplasmic reticulum (ER), and the Golgi apparatus. Together they act as the 'industrial' sub-units of the cell, 'manufacturing' proteins, enzymes, amino acids, and other chemicals and molecules as needed by the cell, or in many cases to be transported [exported] outside the cell. "With mind-boggling precision, each cell manufactures nearly 200,000 different

⁴⁵ It will be useful to define 'metabolism' since a sustainable human settlement, a village-cell, could be considered to have a metabolic process: "Metabolism – The complex of physical and chemical processes occurring within a living cell or organism that are necessary for the maintenance of life. In metabolism some substances are broken down [consumed] to yield energy for vital processes while other substances, necessary for life, are synthesized [manufactured]. (American Heritage Dictionary).

chemicals, hundreds at a time" (Benyus, p. 187). "A cell is like a big industry, which manufactures different products at different sites, ships them around to assembly plants, where they are combined into half-finished or finished products, to be eventually, with or without storage in intermediate facilities, either used up in the household of that particular cell or else extruded for export to other cells or waste disposal" (Weiss, as quoted in Augros and Stanciu, p. 30)." (from Mare, 2000b, p. 36).

Well-substantiated in the literature is the benefit of compartmentalizing, within a metaphoric "endomembranous network," the 5000 person village-scale cell into 'neighborhood units' of 500 people each. Writes Michael Corbett, the designer of Village Homes near Davis, California, a development that many would consider an authentic example of 'sustainable community':

"Just as large and small towns have both advantages and disadvantages, so do large and small neighborhoods. In a very small neighborhood, there is not as much diversity, but it is easier to know all the people well. Large neighborhoods offer more diversity and can become stronger economically, but as they get bigger, they lose the feeling of community.

Author Kirkpatrick Sale, in his book *Human Scale*, presents a number of arguments indicating that 500 people is an optimum number for a neighborhood community in order to have social harmony" (2000, pp. 138-9).

Corbett then quotes Sale:

"Anthropology and history both suggest, as we have seen, that humans have been able to work out most of their differences at the population levels clustering around the "magic numbers" of 500-1,000 and 5,000-10,000.

For the first John Pfeiffer notes that anthropological literature indicates that it is when a population reaches about 1,000 that "a village begins to need policing," and as we have seen, the Dinka villages, like villages in most stateless societies, hold about 500 people on average and almost never more than 1,000...Evidently in these face-to-face societies, where every person is known to every other - and presumably every idiosyncrasy, sore spot, boiling point, and the final straw - it is comparatively easy to keep the peace and comparatively easy to restore it once broken" (p. 139, from Sale, 1980, p. 488).

Corbett then goes on to instruct from his own example:

“On the basis of our experience of living in Village Homes, we agree that the optimum number is 500 people or about 150 homes. When the neighborhood consisted of fewer than 100 households, there seemed to be a lack of individual diversity and resources, and as the number of households approached 200, it seemed that the residents had more difficulty knowing a significant number of their neighbors. At that point, the sense of community seemed not quite as strong” (p. 139).

The permaculturist Bill Mollison contributes to this discussion in his own walkabout way, writing in *A Designer's Manual* in a section entitled, appropriately, “Village Development:”

“Human settlements vary in their ability to provide resources, to develop a high degree of self-reliance, and in their alienating or (conversely) neighbourly behavior according to population size and function. At about 100 income-producing people, a significant financial institution can be village-based; at about 500 all people can know each other if social affairs are organised from time to time.

At 2,000 people, theft and competitiveness are more common, and sects are set up in opposition – the “ecumenical alliances” are lost. Perhaps we should start small, at about 30 or so adults, build to 200-300 people, and proceed slowly and by choice to 500, then “calve” into new neighborhoods or new villages” (1988, pp. 522-23).

According to the typology being applied in this paper, Mollison is writing loosely, because the “neighborhood” and the “village” are two separate scales. The greater Urban Village of 5000 is being proposed as compartmentalized into neighborhoods of 500. Each neighborhood has a distinct function to be served within the greater village; that is, these are not single-use consumer habitations, as is so common in North America today, but are diversified districts integrating

residential with production capacities. Renewable energy production and distribution, derived from solar technologies, is best organized and managed at this neighborhood scale.⁴⁶ From a Human Geography perspective, 500 could be considered the scale of the ‘hamlet,’ so that the 5000 person urban ‘village’ is being sub-organized into ten hamlet-scale neighborhoods. This type of conceptualizing is the essence of Ekistics – the scientific, multi-disciplinary study of human settlements.

Returning to *A Pattern Language* reinforces the recurring preference for this 500 person community ‘unity.’ Alexander provides confirmation in Pattern 14: Identifiable Neighborhood:

“What is the right population for a neighborhood? The neighborhood inhabitants should be able to look after their own interests by organizing themselves to bring pressure on city hall or local governments. This means the families in a neighborhood must be able to reach agreement on basic decisions about public services, community land, and so forth. Anthropological evidence suggests that a human group cannot coordinate itself to reach such decisions if its population is above 1500, and many people set the figure as low as 500...The experience of organizing community meetings at the local level suggests that 500 is the more realistic figure (pp. 81-2)...Mark the neighborhood, above all, by gateways wherever main paths enter it...and by modest boundaries of non-residential land between the neighborhoods” (p. 85).

Resorting to anthropological social terminology, we could say that the 5000 person *tribal* scale is being sub-organized into 500 person *clan*-sized groupings. If the 500 person clans are further sub-organized into 50 person

⁴⁶ Jeremy Rifkin explores an interesting energy vision in *The Hydrogen Economy* (2002): “[T]he hydrogen energy web gives us a new, non-polluting energy regime that decentralizes and democratizes energy so that human populations can live in smaller, more dispersed communities that are less likely to stress the biosphere beyond its limits. The mass depopulation of the countryside and the migration to mega-cities with populations in the millions – which is the defining social feature of the fossil-fuel era – are simply unsustainable from a thermodynamic perspective. Because hydrogen energy is ubiquitous and fuel-cell power plants can be put anywhere and connected in extended energy webs, we can bypass the hierarchical and centralized architecture of the oil age. In the hydrogen economy, industrial and commercial activity can be spread out in a more ecologically sustainable manner, allowing for a more balanced mix in the density of human settlement” (p. 254). Of course, hydrogen is an energy *storage* technology, so the neighborhood energy production centers will need to create hybrid systems of solar, wind, water, biomass, or geothermal electricity production to begin with.

extended family or *kin*-size units, then we arrive at the socio-economic settlement patterning evinced by the Classic Maya (Ashmore, 1981). Based on the archaeological record, these various social groupings were physically arranged as clusters within clusters within clusters. It's been further reasoned that each of these social groupings, at their respective scales, had particular economic functions to serve within the greater community.

"This social organization represents an organic, holarchic, systems-oriented approach. Individuals had the security of being embedded within an ever-expanding social context that culminated in identification with the center. Primary needs (food growing, craft production, etc.) were met locally, within family and kin groups. Artisan guilds were organized within the clans. Pilgrimage Barter Faires were held at the center and regional levels, in concord with the annual calendar, to obtain items not produced at the local level (Friedel, from Ashmore, 1981, p. 378). This entire socio-economic settlement patterning reflects a designed decentralization and distribution of production and responsibility...It is my thesis that the Maya pattern presents a useful model for sustainable settlements of the 21st century" (Mare, 1999, p. 5).

The Classic Maya achieved an impressive, awe-inspiring civilization, especially notable for its degree of refinement in astronomy and cosmology. At the center of each of their ecologically patterned 'cities' (Urban Villages?) stood a ceremonial urban core, or quarter, adorned with monumental architecture. "[I]n their treatment of urban spaces, the Maya did reach one of the peaks we know of in urban design: the skill in taking advantage of topography, the incredible subtlety displayed in the modeling of sequences, the deliberate handling of the element of surprise, and a clear intention to avoid monumental axes" (Hardoy, 1968, p. 29). "Indeed as far as we have been able to interpret the meaning of the great...centers of this period, it seems clear that their overall spatial design and major structures expressed nothing less than divine cosmograms" (Carmack, 1996, p. 295). At this point it may be an understatement to assert that we still have much to learn from the great achievements of the past:

"Rudofsky's book *Architecture without Architects* illustrates some beautiful and profound settlement patterns. Some of the hill towns of Italy, New World pueblos, African lobi, Seripe villages on the Volta, the walled towns of the Near East, and Balinese villages all contain some of the practical and aesthetic elements and relationships which can serve us as models of functioning small communities onto which advanced solar, material, electronic, and ecological elements could be grafted" (Todd and Todd, 1994, p. 116).

One more important point is still yearning to be made before concluding this preliminary inquiry into "The Urban Village: Synergy of Ecology and Urbanism."

There is a potent subfield of General Systems Theory called Living Systems Theory. According to this body of knowledge, all living systems are characterized by three essential qualities: 1) a 'pattern' of *autopoiesis* or self-creation, 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. This is the scientific definition of living systems forwarded by Capra (1996). If we are going to move *beyond* sustainability, beyond mere steady-state maintenance, to flourishing conditions of regeneration and renewal, we are going to need to design our Urban Villages as dynamic 'living systems' superimposed upon the decaying 'mechanical systems' produced in an era dominated by technocratic scientific-industrial rationalism.

When we apply the principles of living systems to the design and implementation of Urban Villages, it becomes apparent that the real task is to gradually introduce the patterns, processes, and structures so that the Urban Village is capable of designing and creating *itself*, 'autopoietically,' and so

become a genuine living system, harmoniously integrated into its environment – a true synergy of ecology and urbanism.

“[A]ll that is unique with respect to adaptation in living systems is that in them the autopoietic organization constitutes the invariant configuration of relations around which the selection of their structural changes takes place during their history of interactions” (Maturana, 1980, p. xxi). “[T]he fact that all that must remain invariant in an autopoietic system...is its autopoietic organization, implies that the structural changes of a living system are necessarily open-ended, and in principle can take place endlessly with recurrent and/or non-recurrent configurations” (Maturana, in Zeleny, 1980, p. 54). “The actual ontogeny of an autopoietic unity corresponds to its history of structural change while realizing its autopoiesis under constant structural coupling to its medium” (ibid, p. 71). “This process of historical structural change through continuous structural coupling with a medium is, I think, the essence of the phenomenon of evolution” (ibid, p. 69).

What I take all this to mean is that as an autopoietic unity – a self-organizing, self-maintaining, self-regenerating autonomous whole, concerned primarily with its own self-renewal – the Urban Village will need to be designed and constructed, modified and maintained, *by the very same people who are going to be living there*, over countless generations. This is also Krier’s vision: “We...have to accept that a large part of building in the future will not be implemented by further industrialization but, of necessity, by traditional artisan methods of production (p. 199)...The reconstruction and promotion of a broad, highly-qualified, autonomous craft industry is a necessary condition for the reconstruction of a dynamic urban civilisation” (p. 203). These artisan and craft industries, organized into guilds at the neighborhood-clan level, will be indigenous and vernacular to the Urban Village. The caring and highly skilled artisan and craftspeople, spanning generations, will continually build and rebuild their Urban Village – as an art form, as an expression of life, as an offering to their community. They will be supported by the inhabitants and esteemed for creating such beautiful places to live.

Unfortunately, much of the wreckage left behind by an era of colonizing ‘developers’ will need to be deconstructed and removed, the materials recycled. Since developer-led constructions are *allopoietic* – created by an external force – they lack context; and the essence of ecology is contextual. What will be done with all the mechanical skyscrapers, for example?

As mentioned, one of the inherent qualities of a living system is *cognition* – which implies a certain capacity for knowing, the presence of ‘mind.’ “[M]ind is self-organization dynamics proper...Mind is immanent, not in a solid spatial structure, but in the processes in which the system organizes and renews itself and evolves. An equilibrium structure has no mind” (Jantsch, 1980 p. 162)

“The essential design task does not only concern technological constructs, but also the design of ecosystems, human communities and cultures...At stake is virtually the recreation of new worlds in all their multilevel reality – a grandiose extension of the recreation of the world in sociocultural evolution” (ibid, p. 282)

There are exciting prospects indeed when creating the conditions for the emergence of the Urban Village as a cognitive living system – a true synergy of ecology and urbanism. What could compare to that achievement?

Conclusion

In *Sustainable Communities: A New Design Synthesis for Cities, Suburbs and Towns*, a collection that is clearly a seminal treatment of the themes developed in this paper, Van der Ryn and Calthorpe show prescient insight by going right to “the heart of the matter:”

“In the last years of her life, Margaret Mead suggested that villages are the fulcrum around which people can make major changes in the future. As an anthropologist, Mead may have had in mind that for two-thirds of the world population [now one-third] the village is still the primary settlement pattern. More than that, perhaps the village represents an organic vision of community, because the central theme of village is that of a community directly tied to the productivity of the land. The size of a village is usually defined by how far one can walk to outlying fields. The village is an organism that literally builds itself and feeds itself and today would also grow or collect its own fuel and energy. In the village, everyone is both a producer and a consumer of goods and services to be sold, exchanged, or given freely. The composition of the village includes all age groups living together, not segregated spatially or by institutions. A village might have from a few hundred to a few thousand people. At the latter size, the village’s core is its trading center and stores, also containing the centers of local governance, communication, education and religion, the town square or commons, and places to gather together – in other words, it contains coherence, stability, continuity, sustainability” (1986, p. 57).

During the same fertile period of idea gestation in which *Sustainable Communities* appeared, Nancy Jack and John Todd, in another seminal work, *From Eco-Cities to Living Machines: Principles of Ecological Design* (originally published in 1984), echoed:

“For several years during...the mid-seventies, William Irwin Thompson had been urging people working in futuristic concepts to think in larger terms [than the private structure or single family

house] and to reconsider the nature of human settlement. He advocated a post- or meta-industrial village, which he called the *deme*, as the next unit for design. It was Margaret Mead, however, who was the most immediate catalyst for the next stage in our work...She felt we must begin to envision the same kind of integrative architecture at the level of the block, the neighborhood, or the village" (1994, pp. 11-12).⁴⁷

Isn't it wonderful when research uncovers strong historical precedent for one's intuitively sensed ideas? In April of the year following Dr. Mead's death (1979), the Todds convened a conference entitled, *The Village as Solar Ecology: A Generic Design Conference*. "The working hypothesis for the meetings was given in the original proposal which stated:

The blending of architecture, solar, wind, biological and electronic technologies with housing, food production, and waste utilization within an ecological and cultural context will be the basis of creating a new design science for the post-petroleum era" (*ibid*, p. 12).⁴⁸

How interesting: a design *science*. That has a ring of Buckminster Fuller to it. In their book, no doubt forwarding themes generated at the conference, the Todds went on to develop and articulate what they called "Emerging Precepts of Biological Design:"

- *Precept One*: The Living World is the Matrix for All Design
- *Precept Two*: Design Should Follow, not Oppose, the Laws of Life
- *Precept Three*: Biological Equity Must Determine Design
- *Precept Four*: Design Must Reflect Bioregionality
- *Precept Five*: Projects Should be Based on Renewable Energy Sources
- *Precept Six*: Design Should be Sustainable through the Integration of Living Systems

⁴⁷ **deme** **n.** 1. One of the townships of ancient Attica. 2. *Ecology*. A local, usually stable population of organisms of the same kind of species [Greek *demos*, common people, deme...] – American Heritage

⁴⁸ To further pinpoint the gestation of these ideas, speaking of *Sustainable Communities*: "The origins of the book go back to the summer of 1980, when a remarkable group of 45 people gathered at the Westerbeke Ranch near Sonoma, California. The purpose was a week-long Solar Cities Design Workshop, sponsored by the Solar Energy Research Institute (SERI)" (Van der Ryn and Calthorpe, p. v).

- *Precept Seven*: Design Should be Coevolutionary with the Natural World
- *Precept Eight*: Building and Design Should Help Heal the Planet
- *Precept Nine*: Design Should Follow a Sacred Ecology

So we see that *twenty years ago*, conceptual seeds were being planted in anticipation of the challenging situation we find ourselves in today. These design innovators, and so many more (see Zelov, 1997, *Design Outlaws on the Ecological Frontier*), instigated and have been laying a firm groundwork upon which can be built ideas like those elaborated in this present paper, *Urban Village: Synergy of Ecology and Urbanism*. Yet, even with such a firm groundwork, and with a twenty year span within which to implement, I still have to wonder why there are so few working models on the ground, particularly in ‘affluent’ North America?⁴⁹ It would seem that intelligent designing, especially at settlement scale, is an anomaly, a rare exception – veritably *utopian* (which means literally ‘no place’).

It turns out that even the “Urban Village” concept, explicitly, had a solid beginning back in this same fertile period. I’ve been saving this story till last because it describes so well what I consider to be the essence of the arguments raised in this paper. Returning to Van der Ryn and Calthorpe:

“An influential report from HUD and the Urban Land Institute (“The Affordable Community: Growth, Change, and Choice in the ‘80s”)⁵⁰ defines urban villages as ‘a form of development that combines compactness, infill and revitalization, transportation options, mixed use, and affordable housing. A central feature of the urban village concept is that location of jobs should be closely linked to housing. Urban villages can be planned and developed in central cities, suburbs, small towns or rural areas.’ This statement represents the conventional wisdom on what ‘village’ could mean in today’s context. There is a realization that efficiency of energy and resource use is an important criterion, hence the emphasis on compactness to reduce land and servicing costs, and the call for

⁴⁹ For more on this paradox, see Paul Wachtel (1989) *The Poverty of Affluence: A Psychological Portrait of the American Way of Life*.

⁵⁰ I have a sense the mentioned report may no longer be accessible since a ‘search’ on the Urban Land Institute website did not match anything.

bringing home and work closer together. It is a move toward social and ecological coherence, but it falls short of proposing a reintegration of production and consumption within the village structure, or of calling for a move toward local self reliance in terms of the production of food, energy, and the necessities of a local economy" (1986, pp. 57-8).

There it is: the key, described so well back in 1986. *Without local production of basic needs, the village* – whether “traditional village,” “ecovillage,” or “urban village” – *simply will not be sustainable* – will not be able to be “continued into the indefinite future” in its existing form. The “village” is a self-contained, human-scale, socio-economic *production* unit. And so, the authentic *Urban Village* also will incorporate basic production capacities right into its structure, into its very *design*; otherwise we’re just playing with imagery, blowing smokescreens, throwing around catchy slogans in a feint effort at appearing ‘aware’ of solutions. The mass proliferation of “consumer enclave” urban villages surely will attest to this spurious gimmickry.

Make no mistake about it: entrusting the future of our built environments to private interests with bottom-line profit motives will lead only to further disintegration and anomie – and this disintegration will reach crisis proportions during energy descent. Regenerative Urban Villages – the sustainable retrofitting of the urban pattern – will need to be conscientiously planned by knowledgeable entities in service to the public good. The planning profession, in concert with local and regional governments, will need to lay out the broad strokes of desired pattern, process, and structure, and then let the local people fill in the details.

“As planners we have already heard about the need for designing our living areas in compact and diverse ways so that we can reduce energy demand, support transit and provide employment opportunities close to mixed-use communities. While much of the energy issue is tied to international dynamics, many of the solutions lie in changing our habits at home. Some municipalities have tentatively started to implement these ideas while many others are still debating the very need to make changes. City areas are going to have their share of problems, but it is lower-density,

postwar suburbs that are going to shoulder the burden of these changes. If municipalities have not already started to address these basic steps, it means that the chances of success are diminished and a reactive response can only try to catch up with the problem. The implications of running out of cheap energy, coinciding with major public health issues and an aging population go well beyond our previous expectations of responding to societal change and needs. Planners must start thinking and planning for new imperatives" (Leeming, 2005).

Verdad. I think these new imperatives begin with re-education – both within the planning profession and amongst those attracted to positions of local government. Far too many of the decision-makers today are still operating within a limited ‘mechanistic’ mindset; far too many still believe that the accumulation of material goods is the highest goal in life. With this sort of mindset and with these values, the decisions being made will continue to deteriorate both the public welfare and its supporting environment.

More than just an education in technical considerations such as density, placement, traffic patterns, etc., decision makers will benefit from being introduced to a new *epistemology* – a new cognitive basis for judging what is valid knowledge.⁵¹ The transition to this new epistemology is already well underway in the sciences – it could be described as an evolution away from mechanistic and toward *life-centered* ways of knowing.⁵² Understanding the sublime implications of this epistemology naturally leads to a ‘holistic worldview.’ With the influence of a holistic worldview, decisions are made for the long-term benefit and betterment of Life, in all its diversity of forms. This is the application of *Precept 9* – Design Should Follow a Sacred Ecology: “[The] undifferentiated interconnectedness of the human and natural worlds in an unknowable “metapattern

⁵¹ For an introduction to this proposed epistemology for the designers of sustainable human habitation systems, see Mare, 2004, *Towards an Epistemology for the Ecovillage Designer: Place-Making, Co-Worlding, Eco-Poiesis*.

⁵² See Module 1 of the Worldview dimension in *Ecovillage Design Education* (2005) Gaia Education

which connects" is what we have come to think of as sacred ecology" (Todd and Todd, p. 79).

Is this too much to expect from professional planners and politicians? Are we really to imagine that decisions will be made based on long-term social and environmental health rather than on short-term personal financial enrichment? Doesn't this sound, after all, *utopian*? Maybe; but in the final tally, it may become, after all, absolutely necessary.

In preparation for closing, here are some thoughts from James H. Kunstler, who contributed so much to the ruminations developed in this paper. Kunstler has dramatically named the coming period of energy descent as "The Long Emergency:"

"The circumstances of the Long Emergency will require us to downscale and rescale virtually everything we do and how we do it, from the kind of communities we physically inhabit to the way we grow our food to the way we work and trade the products of our work. Our lives will become profoundly and intensely local. Daily life will be far less about mobility and much more about staying where you are. Anything organized on the large scale, whether it is government or a corporate business enterprise such as Wal-Mart, will whither as the cheap energy props that support bigness fall away. The turbulence of the Long Emergency will produce a lot of economic losers, and many of these will be members of an angry and aggrieved former middle class...We will not believe that this is happening to us, that 200 years of modernity can be brought to its knees by a world-wide power shortage...If there is any positive side to stark changes coming our way, it may be in the benefits of close communal relations, of really having to work intimately (and physically) with our neighbors, to be part of an enterprise that really matters and to be fully engaged in meaningful social enactments instead of being merely entertained to avoid boredom" (2005, pp. 46-8).⁵³

⁵³ In order to re-emphasize the essential point being made in this paper, here is Kunstler from a slightly different tack: "America will have to re-condense its everyday life into coherent towns, villages, neighborhoods, and even cities with authentic agricultural hinterlands...I see virtually every activity in America having to be downscaled, from commerce and farming to schools. We're going to have to live locally." (www.kunstler.com/mags_ure.htm)

Scholar Richard Heinberg, of the New College of California, paints a somewhat grimmer picture in his 2004 book *Powerdown*:

"A possible scenario for the collapse of our own civilization might go something like this: Energy shortages commence in the second decade of the century, leading to economic turmoil, frequent and lengthening power blackouts, and general chaos. Over the course of several years, food production plummets, resulting in widespread famine, even in formerly wealthy countries. Wars – including civil wars – rage intermittently. Meanwhile ecological crisis also tears at the social fabric, with water shortages, rising sea levels, and severe storms wreaking further havoc. While previous episodic disasters could have been dealt with by disaster management and rescue efforts, by now societies are too disorganized to mount such efforts. One after another, central governments collapse. Societies attempt to shed complexity in stages, thus buying time. Empires devolve into nations; nations into smaller regional or tribal states. But each lower stage – while initially appearing to offer a new beginning and a platform of stability – reaches its own moment of unsustainability and further collapse ensues. Between 2020 and 2100, the global population declines steeply, perhaps to fewer than one billion. By the start of the next century, the survivors' grandchildren are entertained by stories of a great civilization of the recent past in which people flew in metal birds and got everything they wanted by pressing buttons" (pp. 149-50).

No doubt, we are in for some adjustments; *and*, I still hold fast to the conviction that, overall, in health and well-being, circumstances actually will be *improved* 50-100 years hence from what they are now.⁵⁴ Perhaps my unshaken optimism comes from active involvement with the Global Ecovillage Network – here is a group of steadfast loyalists to the inherent dignity of the human condition. Ecovillages are popping up all over the world as research, training, and demonstration models of genuine sustainable community design. These are human habitation systems designed from a life-centered 'holistic worldview,'

⁵⁴ How could you possibly relay a story like Heinberg's, in that dismal tone, to a group of young people and still expect them to care one iota? That's why I'll keep intoning my version of the story as "decline in material complexity = rise in consciousness and human potential."

'beyond sustainability,' toward conditions of thriving, flourishing plenitude: that's their goal and very reason for being.

In their beginning stages, these ecovillages have needed to be somewhat secluded from mainstream vibration. They are germinating a culture for the coming Solar Age. They are providing a bridge between the culture that existed *before* the energy flux with the culture that will exist *after* the energy flux – this culture being perennial, an intrinsic accumulation of 'human-as-solar-farmer.' Being somewhat secluded, the ecovillages have been able to nurture this perennial culture in relative safety and security, with reduced diversion. Once again, here's Heinberg:

"I am reminded also of friends in several intentional communities and ecovillages around the world who have likewise decided to pursue Powerdown [voluntary energy reduction] with lifeboat-building [insular community] strategies simultaneously. While they engage in activism on many fronts...they also have established rural bases where they save heirloom seeds, build their own homes from natural and locally-available materials, and hone other life-support skills that they and future generations will need. I admire these people unreservedly; if there is a sane path from where we are to a truly sustainable future, these folks have surely found it" (2004, p. 184).

As an enthusiast and practitioner, I am concerned that the prevailing public image of the 'ecovillage' will remain an entropic re-iteration of the "back to the land movement" – you know, utopian rural outposts where people go to avoid the unpleasantness of society. I'm further concerned that the relative seclusion and insularity that has been needed to nurture perennial culture will thicken into protective isolationism and an unfortunate tendency toward moral elitism. Heinberg goes so far as to suggest a sort of monastic order of "new monks" – collectivities who have taken on the responsibility of preserving the intellectual and literary legacy of civilization.

"It is important to draw a distinction between the *preservationist* communities of service that I am advocating, and mere *survivalist*

communities. The latter exist primarily for the benefit of their members. Such communities will be regarded with suspicion and envy by others, and will be perpetually on the defensive. Preservationist communities, by contrast, will persist through acts of service that will make them indispensable to the regional population. Members of such communities will teach important skills – food growing and storage, tool and clothing making, house and boat building, renewable energy generation, and more; and provide healing, entertainment, general education, spiritual leadership and counseling, exchange depots for food and other commodities, seed banks, biodiversity refuges, and more. Survivalist communities will need to protect themselves from the people around them; preservationist communities will be protected by the people they serve" (2004, p. 160).

It is precisely because of the predisposition toward imagining sustainable community experiments, especially ecovillages, as isolated rural outposts with 'survivalist' tendencies that the full potential of the distinctly *Urban Village* needs to be openly explored. This paper is a purposeful step in that direction. During conditions of energy descent, it is the urban and suburban contexts that will pose the most challenging adjustment and retrofit problems: here's where the people are concentrated and here's where the infrastructure is most lacking for any measure of self-reliance. By beginning now to sub-organize and constellate the urban pattern into self-contained, self-maintaining, self-regenerating, village-scale nodes – true urban villages with their own primary production capabilities, a genuine synergy of ecology and urbanism – we will be consciously preparing for the transition to a reduced-carbon, solar future, the next stage of human and human-in-nature development.

The first groups to consciously move in this direction and have the wherewithal to successfully set up viable working models just may become the protected 'preservationist' communities that Heinberg envisions – for they will be pioneering lifestyles, life ways, and life knowing that will become the guides from which others may learn. With that in mind, fundamental ecovillage design principles and practices *do* have application to the retrofit of the urban pattern.

“A building or town will only be alive to the extent that it is
governed by the timeless way.

It is a process which brings order out of nothing but ourselves; it
cannot be attained, but it will happen of its own accord,
if we will only let it.

To seek the timeless way we must first know the quality without a
name.

There is a central quality which is the root criterion of life and spirit
in a man, a town, a building, or a wilderness. This quality is
objective and precise, but it cannot be named.

The search we make for this quality, in our own lives, is the central
search of any person, and the crux of any individual person's story.

It is the search for those moments and situations
when we are most alive.

In order to define this quality in buildings and in towns, we must
begin by understanding that every place is given its character by
certain patterns of events that keep on happening there.

These patterns of events are always interlocked with certain
geometric patterns in the space. Indeed, as we shall see, each
building and each town is ultimately made out of these patterns
in the space, and out of nothing else...

The specific patterns out of which a building or a town is made
may be alive or dead. To the extent they are alive, they let our inner
forces loose, and set us free; but when they are dead,
they keep us locked in inner conflict.

The more living patterns there are in a place – a room, a building,
or a town – the more it comes to life as an entirety, the more it
glows, the more it has that self-maintaining fire which is
the quality without a name.

And when a building has this fire, then it becomes a part of nature.
Like ocean waves, or blades of grass, its parts are governed by the

endless play of repetition and variety created in the presence of the fact that all things pass. This is the quality itself."

- Christopher Alexander, *The Timeless Way of Building* (pp. ix-xi)

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"Sustainable Development is a cultural adaptation made by a society as it becomes aware of the emerging necessity of nongrowth" (source undocumented)