Redefining Community in the Ecovillage

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Abstract

Ecovillages provide important insights into the human dimensions of sustainability, but remain relatively unexplored. In this paper I highlight critiques of the society/nature divide and emphasize the need to pay attention to the paradigms that influence how people think and what they do. I discuss the ecovillage model as a rejection of the outmoded "dominant western worldview" in favor of one that recognizes human-ecosystem interdependence. Drawing on field research, I examine the practical means by which ecovillages strive to institute and reinforce an alternative paradigm. In addition to explicit intention, rules, the organization of social interaction, and physical characteristics, I identify an expanded notion of community and its accompanying ethic as distinguishing features of the ecovillage. I suggest the possibility that these are necessary features of a sustainable society.

Keywords: ecovillage, sustainable community, sustainability, society/nature divide

Introduction

What's the organization of a society that is capable of doing ecological design? What does such a society look like?... And what's the point, the ultimate object, of ecological design? It's not just about houses or water or any particular system. It has to be about how we think. The ultimate object of ecological design is the human mind (Orr 2004, 190).

Toward the end of the 20th century, as "environmental problems" became increasingly salient and began to occupy a more prominent place in public discourse, so too did critiques of modern western social thought. Environmental sociology, for example, emerged in response to the discipline's "human exemptionalism paradigm" and advocated an ecological paradigm that would recognize human-ecosystem interdependence and biological limits to societal phenomena (Catton and Dunlap 1978, 45). That the conceptual divide between society and nature is at the root of most environmental problems has been a resounding theme in environmental sociology since its inception (Benton 1994; Catton and Dunlap 1978; 1980; Clark and York 2005; Dickens 2004; Freudenburg, et al. 1995; Goldman and Schurman 2000; Redclift and Woodgate 1994; Schnaiberg and Gould 1994). Sociology was not alone in beginning to rethink human-environment relations, as evidenced by the concurrent surfacing of environmental specialties within other disciplines, such as environmental history, environmental philosophy, and environmental economics.[2]

As efforts to rethink the society/nature divide intensified, the need to revise the concepts that govern thinking about such matters became increasingly apparent. Scholars identified a need to talk about the points of contact themselves and to address the inseparability of "nature" from "society" (Goldman and Schurman 2000). For some, this has come to mean identifying a single concept that captures the "hybridity" of life in the world. Novel attempts to reframe environment-society relationships include "coevolution" (Norgaard 1984), "mutual contingency" and "conjoint constitution" (Freudenburg et al. 1995), the "co-constructionism" of actor-network theory (Murdoch 2001), "ecological dialogue" (Bell 2004), "metabolism" (Clark and York 2005; Foster 1999), and applications of "critical realism" (Carolan 2005). Even more radical, however, have been attempts to rethink, not only relationships, but to acknowledge an entirely different *object of study*. No longer would one study "nature" or "society" at all, but, for example "cyborgs" (Haraway 1991), "quasi-objects" (Latour 1998; 2000), "socionature," (Swyngedouw 1999; Gellert 2005), and "material civilization" (Dant 2006). These concepts are part of larger efforts to shift the focus from separation to relations and to think differently about non-human entities. They mainly have implications for scholarship in promoting a more accurate understanding of certain processes. Some, like Latour, address the practical implications that go along with such a paradigmatic shift. For example, he argues for *ecologisation*, which requires seeing quasi-objects ("there are, literally speaking, no more things") no longer as mere means, but as ends in their own right (Latour 1998, 235). This implies not only an entirely new way of thinking, but also a new way of *doing*: doing politics, science, management, and life. He finds a basis for this in a morality that recognizes other entities as ends in themselves, and not just means to human ends (Latour 1998).

Preceding these academic works and more popularly known, Aldo Leopold's essay describing "the land ethic" is also an indictment of modern ways of seeing non-human entities primarily as means to human ends. Developments in how humans think about themselves in relation to others, he argues, are catalysts in the evolution of ethical systems. The land ethic, following developmental milestones like the Decalogue and the Golden Rule, "simply enlarges the boundaries of community to include soils, waters, plants, and animals, or collectively: the land" (Leopold 1949, 204). This ethic requires that current ways of viewing the land, solely through the lens of economic interests, are transformed — not unlike the, now abhorrent, view of slaves as property. Instead, he urges acknowledgment of the interdependence of all members of the land community and recognition of the limitations of our knowledge about the land mechanism. For Leopold, this ethic is both an "evolutionary possibility and an ecological necessity" (Leopold 1949, 203).

The above concepts, as critiques of the dominant western worldview, are useful for clarifying the need for a paradigm shift and for suggesting a replacement, but they raise a number of important questions. Are we experiencing a paradigm shift and, if so, how far have we come? *How* is an alternative paradigm to be introduced and implemented in practice? And finally, what would a society that has done so look like? While the first question deserves careful consideration, it is much too large to begin to address within the scope of this paper. Here, I focus on the latter two. I propose that ecovillages are attempting to implement a new paradigm and I examine the theoretical and practical contexts in which they do so. In what follows, I discuss the ecovillage model of intentional sustainable community, focusing on its overarching paradigm, the methods of fostering it, and ways that ecovillages and their members reflect it, or not. My findings suggest that what primarily distinguishes the ecovillage model of sustainable community from mainstream neighborhoods, towns, and cities, is an expanded notion of community and an accompanying ethic.

Ecovillages: A General Overview

The ecovillage, a term that came into common usage in the early 1990s, is a specific form of intentional community. Efforts toward intentional communal living in the U.S. are as old as the nation itself. Besides a longing for meaningful community, the most common impetuses for intentional community formation in the U.S. are religious motivations, a yearning for political and economic reform, and a desire for self-fulfillment (Kanter 1972). While ecovillages may share some or all of these goals, what sets them apart is their explicit emphasis on ecology, which supplies many of the

fundamental principles of design and organization. Ecovillages see themselves as holistic, relying on a "three-legged stool" upon which they balance practical efforts to create a life that is socially and personally satisfying, *and* ecologically sound.

An ecovillage is most frequently defined in the following way: a human-scale settlement (usually between 50 and 500 members, though there are exceptions[3]) that is intended to be full-featured — providing food, manufacturing, leisure, social opportunities, and commerce — the goal of which is the harmless integration of human activities into the environment in a way that supports healthy human development in physical, emotional, mental, and spiritual ways, and is able to continue into the indefinite future (Bang 2005, 27). It might be more accurate to say that this describes an *ideal type* ecovillage, rather than a community's defining characteristics. As Ross Jackson (2004, 26) is careful to point out, "the ideal ecovillage does not exist. It is a work in process — a fundamental component of the new paradigm, where much is yet to be learned." Consequently, while an ecovillage may not meet the criteria of this definition, these criteria tend to determine an ecovillage's overall objectives.

Though some degree of energy and resource independence is desirable, ecovillages do not aspire to be completely self-sufficient, nor are they meant to be isolated communities of escape. Rather, ecovillages are intended to be linked in networks of social, economic, and political ties, and the ecovillage movement has been steadily working toward that goal. The concept found its formal organizational home with the formation of the Global Ecovillage Network (GEN) in 1995 by 25 community representatives from around the world. GEN has since divided itself into three regional representations: GEN Oceania and Asia (including Asia, Australia, and the Pacific Islands), ENA (Ecovillage Network of the Americas, including North, Central, and South America), and GEN Europe (including Europe, Africa, and the Middle East) and is partnered with a number of international organizations, including the United Nations (Best Practices and Economic and Social Council), *EU Pologne, Hongrie Assistance à la Reconstruction Economique*, and European Youth for Action.[4]

It is difficult to estimate the number of ecovillages in existence, but using listings in the 2005 *Communities Directory* and the GEN database, I identify at least 178 registered ecovillages in the U.S., of which 113 are established and 65 are in formation.[5] These numbers are necessarily conservative given the parameters I impose and the fact that "there are hundreds, if not thousands, of communities that are not listed in this directory" (*Communities Directory* 2005, 9). Globally, there are 347 ecovillages officially registered with GEN, 147 in GEN Europe, 48 in GEN Oceania and Asia, and 152

in ENA (72 of which are non-U.S.). It is impossible to be certain how many ecovillages there are in the U.S. or the world; many were started as local initiatives and are not yet connected to formal networks. Jackson puts the estimate between 4,000 and 5,000, while Albert Bates' approximation is closer to 15,000, using a more inclusive definition (Jackson 2004, 27).

While the definition above adumbrates the characteristics of an ideal ecovillage, GEN has developed a tool for estimating a community's sustainability status. Useful for revealing strengths as well as specific areas in need of improvement, the Community Sustainability Assessment (CSA) provides indicators of sustainability along ecological, social, and spiritual lines. The GEN, as reflected in the CSA, views sustainability as dependent upon the integration of these three facets of community life. Environmentally motivated efforts that do not attend to the social and personal are inadequate, as are communitarian efforts that lack attention to ecology. In order to situate the goals of particular ecovillages in a broader context, I include some excerpts from the ecological component of the CSA, representing GEN ideals. The CSA, maintains that

> the ecological aspects of community life are balanced when...people are deeply connected to the place in which they live...[they] live in synchrony and harmony within the ecological system of which they are a part...[and] human life-styles regenerate, rather than diminish the integrity of the environment (CSA, 6).

Such statements reflect the GEN's alternative paradigm and are helpful for connecting the goals and ideals of particular ecovillages to those of the global ecovillage movement.

A Closer Look: Particular Ecovillages

During the summer of 2006 I visited a total of eight ecovillages in three southeastern and two northeastern states. Four were founded prior to 1975 and the remaining four were established in the early 1990s or more recently. Ecovillage site selection was determined by the following community characteristics: openness to visitors, feasible driving distance, and diversity in location and age. Visits ranged from one to eight days, with a mean of two days, and consisted of a combination of interviews, informal conversations, shared meals, and participation in work projects and social events. I began with a set of questions regarding basic characteristics about demographics, biophysical environment, and the organization of social systems, as well as information about ethical foundations, sources of conflict, and perceived advantages and disadvantages. While my list of questions, in some

ways, guided my interactions with ecovillagers, it did not strictly determine them. I allowed interviews and other conversations to develop naturally, permitting interviewees to steer discussions toward topics they deemed important. In what follows, I will refer to these communities as Ecovillages A-H to protect anonymity; I have changed individuals' names for the same reason.

I also participated in an ecovillage design and permaculture practicum at an internationally renowned ecovillage training center. The course covered the principles governing ecovillage organization *in general*, supplying the necessary context through which to understand particular ecovillages. It provided first hand experience with some of the intellectual and physical labor that goes into ecovillage development, enabling me to better understand and relate to the experiences of actual community members. It also provided opportunities to talk with a greater variety of people involved in such work, in various capacities, than I would otherwise encounter. The course provided a basis for my understanding of the practical challenges of ecovillage formation and maintenance and helped me to situate and interpret what I observed in visits to particular ecovillages. In what follows I discuss these ecovillages, focusing specifically on the practical ways in which they strive to realize a new paradigm and on the sorts of communities these efforts produce.

Establishing Intentions

Ecovillagers report a great variety of motivations for wanting to be part of an ecovillage. It is not surprising to learn that most ecovillagers, especially the founders, claim to have long held ecological sympathies and the desire to act on them. There are community members, however, who describe their former selves as not particularly environmentally-minded. They cite a range of other motivations for joining an ecovillage. Common among them are a longing for community, a safer environment, and a good atmosphere for children, though there are other reasons. Sarah says she was "very mainstream [and] not an environmentalist" before deciding to help found the ecovillage that would become her home. A health condition (Multiple Chemical Sensitivity) — and the frustrations of trying to find people who could help her deal with it — led her to a conference at which she met a green builder who happened to mention an ecovillage project being started near her. She contacted the founders, discussed the project with them, and invested in the community as a resident. Linda admits that, while she liked the idea of an ecovillage, her initial motivation was that home lots in her community were far cheaper than in neighboring subdivisions. Prospective ecovillagers I met expressed the desire to "find people to care about and who care about them," "escape the craziness of consumer society," and "seek a path of right

livelihood." Whatever the initial reason for joining, membership carries a certain obligation to be committed, to some degree, to the community's overall mission and goals.

Being an intentional community, the community's vision, mission, and goals are clearly articulated and are manifest in specific policies and practices with which residents must comply. In most cases, the founding members draft the original documents. This can be a long process and a statement of purpose can go through several iterations as some people opt out and others join the project (Christian 2003). While existing mission statements are often part of what attracts new members to a particular community, these documents are open to change through formal processes as current members deem necessary. Some groups' statements are long and detailed, while others tersely express very general goals. The common purpose of these statements is to guide the organization, activities, and daily life of the community and to serve as a touchstone to which the community can refer for reminding or carefully considered adjustment. Such statements tend to reflect how an ecovillage thinks about itself in relation to other people, non-humans, and the rest of the physical world. In short, they reveal the community's guiding paradigm. The statements of Ecovillages A-H reflect a conscious recognition of interdependence between people and the land, the land's inherent value as an end in itself, and the obligation of humans to be good stewards of the land. A small selection of excerpts demonstrates this (see Table 1).

Practical Means of Fostering a New Paradigm

The careful consideration and codification of vision and goals is an important step, but it in no way guarantees that ecovillages will, in practice, reflect these ideals. Some of the most essential features of ecovillages are the ways in which they organize *practical* life around these intentions. In doing so, they both make real progress toward specific goals *and* strengthen and reinforce their guiding paradigm. Key strategies of simultaneous functionality and paradigm reinforcement include rules, physical design, social interaction, and outreach. As I discuss these, I will periodically refer to some basic characteristics of Ecovillages A-H, as well as a larger national sample of ecovillages for purposes of comparison (see Table 2).

Rules

One of the most familiar and straightforward ways of aligning people's behavior with community goals is to establish rules. Every ecovillage has a specific set of policies that govern things like membership processes to house design to leaving the community. According to Tammy, in Ecovillage A, these tend toward expansion, as unfamiliar situations bring

Table 1. Evidence of Ecological Paradigm Represented in Statements of Purpose

EV*	Excerpts from Statements of Purpose
A	• "We pursue the development of our land and resources with a whole systems approach." • "We didn't start out...with the idea of becoming an ecovillage. But...we're placing more and more emphasis on our need to live harmoniously with the natural world as well as with one another."
B	• "Dedicated to caring for people and the Earth, and recognizing the Oneness of all life..." • "Make conscious our connection to Spirit and the Earth and our interdependence with the web of all life..." • "Nurture abundance in the world by enhancing living systems while reducing the consumption of resources..."
C	• "Repair and replant the damaged timberland, reclaiming it for future harvest and returning it back to its natural beauty." • "Show others how to properly utilize land for both habitation and retention of the maximum amount of natural habitat."
D	This group has no explicit mission statement. However, their land trust ownership model suggests an alternative way of viewing the land not as commodity, but as a living resource to be shared by all species and stewarded by humans.
E	• "...We are all...one in all of creation." • "We believe that the earth is sacred...[and] agree to be respectful of the forests, fields, streams and wildlife that are under our care." • "We believe that humanity must change to survive."
F	• "Dedicated to cooperative, healthful, and ecologically sound living...a[n] experiment in sustainable living that works to enhance the lives of its members and the health of its surrounding ecosystems." • "Committed to learning how to respect the land and its nonhuman residents and to helping restore its diversity and health."
G	• "Human health, community health and the health of our planet are interconnected and interdependent." • "Preserve and restore biodiversity, quality, and abundance of natural resources. Balance natural systems so that each generation acts to benefit future generations."
H	• "The purpose...is to share land...and support cooperative and harmonious living situations here and in the larger world." • "Spiritual values are based on concern about each other's well-being, ecological land stewardship, and respect for the right of each member to express their own beliefs about the nature of reality."

* EV = ecovillage

new sets of concerns and the need to amend existing policy accordingly. In this way ecovillages are somewhat bureaucratic in their functioning. They depend upon written rules and records, which usually indicate some form of division of labor and, in some cases, hierarchy. Consensus style decision-making, however — of which at least some elements are present in the majority of ecovillage proceedings — is intended to stave off precisely the characteristics that make bureaucracy undesirable to them: a strict hierarchy, an imbalance of power, impersonality, and inflexibility. In giving all community members regular opportunities to question and

Table 2. Descriptive Statistics of Ecovillages Visited and Ecovillages in U.S. as of 2005

		A	B	C*	D	E	F	G*	H	U.S. Ecovillages [a]
Age[b]		39	16	5	36	36	14	14	34	21.4 (mean)
Population		100	65	na	19	250	162	19	93	35 (mean)
Size (in acres)		450	320	70	140	1750	175	183	520	294.3 (mean)
# of residences		8	30	2[c]	12	60	60	7	35	13 (mean)
Area	rural	x	x	x	x	x		x	x	44
	urban									10
	other							x		5
	missing									2
Income shared	yes	x								8
	no	x	x							29
	partial						x			4
	other				x	x		x	x	17
	missing									3
Decisions made	consensus		x		x		x		x	43
	other	x		x		x		x		8
	missing									10
Eat together	nearly all	x	x							28
	2-5/week						x	x		13
	1/week					x			x	5
	1-3/month				x					8
	rarely									3
	missing									4
Food grown	>50%	x								4
	21-50%						x			13
	6-20%				x				x	15
	1-5%		x			x				23
	none									3
	missing									3
Labor required	yes	x	x				x	x	x	52
	no				x	x				5
	missing									4
Diet[d]	omni	x	x	x	x			x		22
	prim veg						x			20
	prim vgan					x				3
	veg only									4
	other									3
	missing									9

* Indicates ecovillages in formation

[a] Established ecovillages only. N = 61; these data come from the Communities Directory

[b] Age based on year of group formation, not the year they broke ground

[c] Will have 12 homes when complete

[d] Prim = primarily; Veg = vegetarian; vgan = vegan

reexamine existing rules, the rules remain open to adjustment as the community deems necessary. Moreover, participation in policy-making gives members a greater sense of ownership regarding expectations and limits. As several community members explained, even when they disagree with the final decisions, they feel more satisfied with the outcome having had the opportunity to voice their concerns.

One of the most distinctive types of policy in ecovillages is that which dictates building practices and land use. Building codes, zoning laws, and even homeowners associations serve a similar function, but with important differences. Ecovillage C's covenant stipulates, for example, that architectural designs be approved by the board of directors (eventually to be comprised of residents) prior to construction, and includes rules governing land use, energy systems, farming operations, habitat protection, and tree removal. The differ-

ence is in the explicit intentions that guide such policies in the ecovillage. The stated primary intention of these restrictions is to "retain the integrity of the property, preserve the natural habitat, and demonstrate the ability of a group of people with common mind and purpose to choose intelligent and prudent means of living and sharing in community." This statement expresses intentions that pertain to more than just the physical development of space, addressing personal and social aspects of planning, as well.

Some of Ecovillage G's rules require: the composting of all vegetable matter, the use of organic and biodegradable materials in the home, and protection of nesting sites, forested land, wetlands, and other wildlife habitats and corridors. One of the purposes of Ecovillage A, as stated in its bylaws is to assume "responsibility for maintaining the availability of natural resources for present and future generations through ecologically sound production and consumption." To this end, the entire community is organized around the principle of minimizing individual consumption and sharing resources. Ecovillage A exhibits a high, and rare, degree of communalism, sharing income, homes, meals, and most other goods. The rules set up to support this type of community automatically make it easier to implement certain ecological practices. Cars, for instance, are communally owned, gardening is done organically, and the wood used for heating and construction is sustainably harvested from on site. Ecovillage F has rules governing the design of the homes, maximizing sustainability strategies and leaving room for future improvements like a gray water system and centralized energy collector. Although the policy making and amending processes can be tedious, ecovillagers agree that clear, well-understood policies do much to encourage compliance and social harmony. Such regulations by themselves, however, are not sufficient to make an ecovillage function as it should. They seem to serve as a formal basis on which the multiple layers of paradigm reinforcement in ecovillage life rest — physical organization, social interaction, and outreach.

Physical Organization

Implicit in the physical characteristics of the community are reminders and reinforcements of ecovillage ideals, which include environmental stewardship, high quality of life, and strong community. Ecovillage design should reflect a community's spiritual,[6] social, and ecological lifestyle, making each design unique (Bang 2005, 120). There are commonalities, however, in ecovillage design that mirror an overarching paradigm. Fundamental design goals revolve around themes of systemic thinking, ecosystem health, and an overall sense of respect for others, both human and non-human. These goals are manifest in specific efforts to preserve green space,[7] maximize energy efficiency, and make optimal use of

space and materials. Obviously, this is easiest to do in ecovillages that are built on "raw land," but even communities that renovate developed or partially developed sites must consider these factors in planning.

Architect and designer of conservation communities, Greg Ramsey, advocates a fairly standard ideal of 50% green space conserved "in town," 75% in suburbs, and 90% in rural areas (Preston and Ramsey 1999, 17-18). Ecovillages A, D, E, and H have preserved the vast majority (over 90%) of their land as green space, and A and E have continued to acquire additional land for restoration and conservation purposes. Of the newer communities, rural Ecovillages B, C, and G will preserve about 83-85% green space. At Ecovillage F, 96% of the land is currently left "undeveloped." Here, a neighborhood of 30 homes is situated on about three acres of land; it currently has two such neighborhoods. At this rate of land use they could *double* their population and still be well within the 90% conservation ideal. Contrast this growth potential with conventional housing developments which allocate anywhere between a half acre to three acres per lot.

The maintenance of open spaces is motivated by the desire to preserve habitat, reinstate native plant and animal species, detoxify land, create wildlife corridors, provide areas for food and energy production, protect the integrity of the ecosystem, and maintain the land's aesthetic value. Government sponsored conservation easement programs are becoming an increasingly common option by which to achieve these ends. Ecovillages F and G, for example, have formally designated large portions of their land to state conservation programs. Land trust arrangements are another option; ecovillages D, E, and H agree to maintain green spaces through independent and community land trusts. Also common in ecovillage design is the use of permaculture, a method that strives to imitate natural systems in the planning of satisfying and sustainable human settlements. The preservation of green space is inherent in this approach, and all but Ecovillage G explicitly use permaculture in their communities. Some are just getting into it, while others offer permaculture courses and workshops.

Some of the most important aspects of ecovillage planning involve identifying zones for agriculture, commerce, and high and low density building clusters. Clustering buildings (including workspaces, residences, and community buildings) is a way to minimize a community's physical footprint, while maximizing privacy, opportunities for work, and social interaction. Common to ecovillages are shared facilities for: community meals, meetings, and other activities (found in A, B, E, F, G, H), laundry (at A, B, E, F), and recreational spaces like playgrounds and swimming areas (all but C, where a pond is planned). A priority in all of these communities is the minimization of spaces that are limited in

functionality and that require high energy inputs to construct and maintain. For example, household lawns and impermeable surfaces for parking and paved roads are kept to a minimum. Universal is the attempt to maximize space for native trees, plants, and the wildlife that inhabit them. In this way, merely walking around one's community can serve as a reminder that the ecovillage is not just a home for people, but for other species as well.

The human home, however, remains an important aspect of the physical environment, and one in which prospective residents and people curious about ecovillages seem to be most interested. One of the most striking features among all of the communities is the architectural diversity. Some communities favor natural building, which makes use of abundant local resources in building cob, stone, straw bale, or cordwood structures. These tend to look more organic in their physical contexts — the round cob huts resembling mushrooms with fat stems. They have a more artsy feel, as natural building techniques tend to allow greater room for spontaneous creativity than does green building. The latter approach to construction focuses on minimizing site disturbance and waste, while maximizing energy efficiency. Characterized by their uses of high tech insulation, wall building techniques, window glass, and heating and cooling systems, "green homes" tend to resemble more conventional residences.

Homes in these ecovillages vary widely along a number of characteristics — ranging from small to large, ascetic to very comfortable, and alternative to conventional-looking — as do the attitudes of the people who build them. Ecovillage A remains committed to ideals of egalitarianism and simple living, reflected in their modest communal homes, largely built from wood collected on site. The founder of Ecovillage C explained that, although he was drawn to natural building techniques, he wanted to build a community that would appeal to "mainstream Americans." His goal is to build homes with conventional amenities and some luxuries, constructed primarily with recycled, salvaged, and green materials and that obtain 100% of their energy from renewable sources. I spoke with the creator and CEO of a green design firm in Pennsylvania, who also happens to be in the process of establishing an ecovillage in his area. Critical of what he calls "the poverty model" (referring to communities like Ecovillage B), he says "I want people to know that they can live as well, better even, in an ecovillage than they are now. I want to demonstrate that ecovillage living is living *abundantly*." Even simple living advocate and founder of the Ecovillage Training Center, Albert Bates — who is careful to distinguish his life of "voluntary peasantry" from the lives of those living in poverty around the world — says, "It is a misconception that living in an ecological way involves sacrifice and hard-

ship. Many modern designs for buildings, vehicles, and new materials require no change in habit whatsoever, while reducing environmental impacts significantly."

What *is* different, however, are the habits of thought that govern the homes people build and the way they live in them. The thoughtful use of recycled materials, solar aspect, and innovative technologies distinguish ecovillage homes from the average American home. The current default in residential development is home construction that is fast and profitable, without much consideration for the land as a whole. The typical process involves the purchase of a tract by a "developer," who has it cleared for installation of roads, sewer, and electric. Builders then purchase individual lots, upon which they strive to build and sell quickly. Without much in the way of attention to habitats and ecosystems, or cooperative planning among builders, such developments tend to be ecologically problematic: generating much waste,[8] building with little to no attempt to maximize energy efficiency (e.g., the default position of the typical house is to face the road, without considering solar aspect), and using the cheapest, often toxic, materials.

Ecovillagers (and others I met who live in "green homes") tend to convey an acute awareness of their sources of energy and water, the practical importance of solar aspect for lighting, heating, and powering their homes, and the ecological implications of daily processes like eating, bathing, and disposing of waste (human and otherwise). Planning, building, and living in such an ecologically conscious home tends to reinforce certain ecological principles in everyday life in ways that conventional housing does not. Ecovillage planning, however, is not limited to materials and technology. Ecovillages are also thoughtfully organized to promote social interaction, another important means of reinforcing an alternative way of thinking.

Social Interaction

Various forms of social interaction, some formal and some informal, play an important role in ecovillage communities. One example is the regularly scheduled business meeting. Ecovillages A-H met, on average, between one to two times per month. These meetings not only ensure that the group gets together on a regular basis, but that it does so with purpose. The usefulness of the business meeting as reinforcement of ecovillage ideals depends on the manner in which meetings are facilitated. Three of my visits (B, D, and H) coincided with business meetings in which I had the opportunity to witness consensus and conflict resolution processes in action. Though there were issues of contention in all of the meetings (e.g., whether and how to acquire neighboring land that would soon be available, what to do about the frequent unruly guest of one of the members, and if

completion of a permaculture certification course should be required for residents), the attendants at two of the communities (B and H) left with a sense of satisfaction and conviviality, and went on to enjoy a potluck dinner together. These meetings were well-organized, with clear agendas and an established protocol. Poorly organized or facilitated meetings (I witnessed an example of this in D) can be divisive, as well as unproductive. Members of other ecovillages corroborate this observation and explained commonly used, and what they see as successful, meeting practices to me, including: assigning well-understood roles at the beginning of each meeting (such as facilitator, scribe, secretary, time keeper), a circular seating arrangement as a reminder of equality, a moment of centering in which people gather their thoughts and remember the community's purpose, reminders about how old and new business fits into the overall mission and goals, and an evaluation at the end in which members can assess what went well and did not go well to promote mindfulness of these things and improve the efficacy of future meetings. Carefully thought out meeting processes not only reinforce community among the ecovillagers — by having to listen to one another, compromise, and overcome conflict — but in being regularly reminded of the ecological, social, and spiritual goals of the community as a whole, their sense of purpose, and the paradigm under which they operate, is renewed. For example, in Ecovillage B, some residents raised a concern about the degree to which other members were living within the community's established standards of ecological consciousness. In trying to determine the validity of the claim, the group revisited the general mission of the community and its standing goals, thereby reminding members of the larger purpose of which they are part. Additionally, during the "evaluation" and "processing" segments of the meeting, those present were asked to consider and articulate what aspects of the meeting went well or poorly. In so doing, they are also reminded of community goals for social interaction and how their personal attitudes and behaviors hinder or facilitate them.

Official meetings are not the only way that an expanded sense of community can be reinforced in ecovillages; members regularly convene for meals, work projects, and other social activities. Shared mealtimes seem to be an essential factor in community life. Although the frequency varies, nearly all communities regularly break bread together (see Table 2). And being ecologically conscious, at least some of the "bread" that they break tends to be either grown on site, from local sources, or, if purchased at the supermarket, is certified organic. All of Ecovillages A-H produce at least some of their own food (A more than 50%, F between 21 and 50%, D and H 6-20%, and B and E are striving to increase their current levels of 1 to 5%). In getting together to prepare and share food — the origins and implications of which they tend to be conscious — members discuss recipes, politics, local markets, and gardening techniques, all enhancing their awareness of the circumstances surrounding their food.

In many communities, processing food, cooking, and cleaning up after meals is part of the work they divide and share. Five of the ecovillages I visited (A, B, F, G, H) require a labor contribution of members. Even for those that do not require minimum labor inputs, it is common for ecovillagers to work together on both community and private projects. For example, I witnessed (and my husband had the opportunity to help with) the construction of a community playground (at G) and an earth bag root cellar (at F). I conversed with a number of ecovillagers over gardening tasks (at B, D, and E). Despite the fact that it was the hottest part of the summer, community members seemed to derive genuine satisfaction from these shared efforts. And not surprisingly, most big work projects were followed by shared food, drink, and general camaraderie.

Many of the ecovillages arrange specific times for organized community fun involving live music, movies, dancing, or skits, but one of the most important forms of interaction is unplanned. Central to social life are the spontaneous conversations that result from community members simply going about their daily business, moving around from place to place. Many ecovillages exhibit a "cohousing" design that involves clustering homes around shared community space, through which pedestrian ways are maximized and automobile traffic is minimized.[9] In this way, neighbor interaction is encouraged by way of proximity, children's play space, and common social facilities, while ensuring privacy through careful planning of architecture and village design. Ecovillages A, B, F, and G are arranged in this way, and member interaction was frequent and appeared to be welcome by ecovillagers. Relaxed interactions in neutral community spaces — not requiring extensive planning, cleaning, or cooking in order to arrange a get together — seemed an effective and easy way to reinforce a sense of community among ecovillagers, as well as bringing them outdoors and into spaces that remind them of their *other* neighbors in the land community.

Outreach

One final factor that reinforces identity and goals is the variety of ways through which ecovillages are connected with "the outside." In addition to the usual purposes that drive ecovillage formation and maintenance, almost all of the ecovillages I visited expressed a desire to demonstrate to others the genuine possibility of an alternative lifestyle. The ecovillage tour is the most common means of modeling this alternative community form. Members of GEN have recently coined the phrase, "ecovillage tourism" to denote "a new type

of green travel, whereby people visit ecological communities around the world to experience low-impact living and community" (GEN website).[10] In regularly explaining the community's origins, pointing out the distinctive features, and answering curious visitors' questions, the ecovillage necessarily remains aware of its role as an example of an alternative approach to living. All of the communities I discuss here allow visitors or provide formal tours. There are communities, however, that are not open to tourists. They generally indicate this on their websites or in the *Communities Directory*. Based on what Tammy (Ecovillage A) describes as the tension between wanting to be an example for others and just wanting to live their lives, I suspect that the exclusion of visitors stems from a community's lesser commitment to the former and a greater desire for the latter.

It is also very common for ecovillages to be sources of classes, workshops, apprenticeships, internships, and conferences on various topics. Such offerings can be regularly found at all of the ecovillages I visited. GEN has formally designated some sites devoted to these activities as "living and learning centres." But ecovillage outreach is not limited to having others visit them. Many of the well-established communities (particularly E) house organizations through which they provide help in disaster relief, civic building projects, political advocacy, and other forms of support around the world.

In addition to the information — scientific, technological, and philosophical — that influences the development of ecovillages, the ecovillage setting demonstrates the importance of subjective *experience* in fostering and maintaining worldviews. Brenda, of Ecovillage D, expresses this in a story about her past burnout as an environmental advocate and educator. She has come to the conclusion that "information is not the place to start ... the problems stem from a deeper source — how they [people] experience themselves in the world." By creating a certain way of experiencing the world, in addition to promoting an intellectual understanding of the reasons for living this way, ecovillages represent the synthesis of knowledge and action, theory and practice.

Challenges in Forming and Sustaining Ecovillages

In discussing goals and ideal practices, it is easy to convey the mistaken notion that ecovillages represent some version of utopia. This, of course, is not the case. Ecovillages face a variety of challenges in both formation and maintenance. The biggest initial challenges are finding the land, money, and people to realize the idea once it is hatched. It is not uncommon for groups to spend years looking for their final location. Founders of Ecovillage G report that their

property was the 50th they had looked at, and the third on which they had a contract. Important considerations besides property location, size, and price, are water issues (especially with agricultural land), legal barriers to sustainable development (e.g. prohibitions on natural building, water catchment, and composting toilets), neighbor issues, and financing options (Christian 2003). For many groups, cost is the biggest hurdle. Striving to minimize automobile use and develop a vibrant economic and social life, cities or towns would be ideal places for ecovillages. Founders, however, end up looking in rural areas for two main reasons: land is cheaper and zoning laws and building codes tend to be more lax. Usually planning to employ alternative forms of energy, construction, and sewage systems, some of the difficulty can be alleviated by selecting a site where either building codes are less stringent or where, being rural, they are less subject to rigorous inspections.

This is the case with Ecovillage B, which has a large cohousing complex and several composting toilets. They regret their distance from the nearest city (a 45 minute drive), a popular destination for shopping, food, and entertainment. Henry admits, "transportation can be tricky. So much driving is in contradiction with our philosophy, we don't want to be part of the pollution problem." Although their goal is to get most of their food locally, they continue to have much of it shipped from far away. Of this, Henry says, "we're still figuring all of this out." This sentiment echoes throughout the communities. A member of Ecovillage A declares, "we're by no means ecologically perfect. There's still a long way to go and lots to be done." Shawn, of Ecovillage E simply says, "it's not supposed to be Utopia; just come here and see the good intentions."

Ecovillage F, though they would like to have a self-contained composting toilet system and be energy-independent, remains on the grid and hooked up to city water and sewer due to local ordinances. For Ecovillage C, Jim's dream is that the entire community of comfortable conventional homes be off-grid; powered by a community system, including a windmill, water wheel, and solar panels. At the time of my visit, however, he was running power tools on batteries and a diesel generator, and the bylaws will allow buried propane tanks to use for clothes driers, ovens, and stovetops. The energy is not 100% renewable, he acknowledges, "but it's getting there." Common among ecovillagers is the recognition that an ecovillage is a process, and not a finished product. Perhaps this is a result of the relative novelty of the community model and the need to constantly adjust to newly discovered needs, or the ecological perspective that thinks in terms of dynamic systems, or both.

Liz Walker, writing about the establishment of Ecovillage at Ithaca describes her former sheepishness when con-

fronted with questions about what makes them ecological, since they are not energy independent. She explains her revised position, saying,

> *EVI takes a pragmatic approach to ecological sustainability. Rather than opt for the sexiest (and often most expensive) appropriate technologies, we put our money into energy reduction measures first. Some of those measures are not easy to spot ... but that doesn't mean they aren't effective. Taken together they add up. We are building a "green" community and culture, rather than individual state-of-the-art "green" buildings. And it's working* (Walker 2005, 125).

Ecovillage F, working toward disconnecting from the grid, employs a variety of innovative technologies to reduce the use of fossil fuels, but uses gas boilers for each cluster of eight homes. Though they see the current source of energy as not ideal, the design of the centralized "energy centers" are adaptable to future uses of solar collectors or fuel cells. Not able to do everything perfectly at the outset, they deliberately built in potential for change. This attitude seems to bode well for ecovillagers and their communities, who tend to exude not only an openness to, but an expectation of change and a willingness to adapt.

Other related challenges to creating a sustainable ecovillage include finding residents, developing a viable economy, and achieving ethnic and socioeconomic diversity. It is not possible to discuss all of these in depth here, but I will relay some of the experiences and observations from the communities I visited. Conflict over the choice of property, the stress of a large investment, and fear of the actual prospect of living in community are common reasons why one or more originally interested person/people back out (Christian 2003, 87). But even after the small core of would-be ecovillagers are in place, a viable community requires larger numbers. Founder of Ecovillage E, which has been as big as 1,350 and as small as 200, says residents agree that 400 is the "magic number," still intimate, but big enough for a strong internal economy and diverse social activities. The ideal is to have plenty of work opportunities on site or nearby, but this has not been achieved in most cases, Ecovillage A being one important exception. Ecovillage B, with about 60 to 70 members, boasts of a few cottage industries and a "town center" with a very small general store/internet café and a restaurant/social lounge. These enterprises employ a handful of people, but most members rely on external money and work off site at least part of the year. Brent, current co-owner of the store/café, complained that it was nearly impossible to make a go of it in such a small community and was contemplating leaving. This is a common dilemma in the smaller more isolated communities, and one that the ecovillage movement hopes will be lessened with the formation of more ecovillages (ideally from existing communities and/or already developed land), creating larger markets for certain goods and services. For the communities that are closer to cities (D, F, and G) this is less of a problem. In these places most people have a short commute to work, but they too would like to see more on-site employment and additional commerce, which is currently severely curtailed by zoning laws.

It can be difficult to attract new members to existing intentional communities, especially ones that are not occupationally and economically appealing. Also, the cost of joining can be prohibitive, working against the expansion, and socioeconomic and ethnic diversity for which ecovillages strive.[11] Data on ethnic diversity is only available for two of the eight communities. In ecovillages A and F, 5 and 10%, respectively, of their members identify as non-white. My limited observations give no indication of higher levels of ethnic diversity in the other communities. Finally, as long as financial and legal obstacles stand in the way of developing ecovillages in more urban areas, this community model will likely remain unfamiliar and unobtainable to many. Though there are urban ecovillages in the U.S. (some of the most well known are in Los Angeles, Cleveland, and Detroit) these are few and far between.

There is a feedback loop at work: the more difficult it is to establish and sustain an ecovillage, the fewer ecovillages there will be. However, this also works in the other direction. Christian (2003, 82) expresses optimism, confident that "culture and laws will inevitably change" the more local and state officials are exposed to successful intentional sustainable communities. But for now, the ecovillage model remains "alternative" in relation to the dominant culture, and its most difficult challenges can come from the values and beliefs prevalent in the dominant western worldview.

Individualism, human exemptionalism, linear systems of production/disposal, and unquestioning allegiance to the goal of economic growth — all evident in U.S. society — run counter to the ecovillage paradigm. Although the people inclined to form or join an ecovillage tend to already reject some or all of these cultural characteristics, it is not a simple matter to unlearn a lifetime of socialization in the dominant culture nor to create a thriving subunit within it. Brenda observes a correlation in her community between the amount of time spent away (in work and school) and resistance to building community in the ecovillage. "The challenges of community say a lot about mainstream society," she explains. That is where most people come from, and the reformation of deep-seated habits, standards, and preferences, in relevant ways, takes time and ongoing effort.

An Alternative Paradigm:
Community and the Land Ethic

Though slow in coming, and many would argue insufficient, attention to "environmental problems" has become increasingly central to public discourse. Currently, discussions of solutions tend to revolve around technology, legislation, and economic incentives. While these are essential components in the efforts to "green" our economy and our cities, they remain a far cry from the overarching framework that governs the ecovillage movement. What distinguishes the ecovillage paradigm is an expanded notion of "community," one that includes not only people, but countless other species as well. I do not mean to suggest that every utterance of the word "community" refers to the land community that Leopold describes. It is fair to say that when most individual ecovillagers employ the term, they are talking about the people with whom they live and the processes involved in the living. I argue, rather, that there is a broader sense in which ecovillagers think about their *home* in a way that implicitly recognizes that home as shared with countless others: people, and a largely unknown variety of plants, animals, and microorganisms.

"Place," for them, is not just a house, a town, or a state. Rather, it is a living system within other systems, a process within processes. Many of the people I spoke with used the term "bioregion" to describe where they live. In fact, at Ecovillage E, I was asked to introduce myself, not by city and state, but by watershed and bioregion. This way of thinking about how one fits into her physical and social context affects how she relates to other entities within that context. Identifying with a bioregion is to acknowledge one's place amidst a complex ever-changing system composed of interdependent parts and processes.

This way of identifying with a system much larger than oneself is evident in some of the following ecovillagers' comments. "What is needed," Brenda says, "is the consciousness that one's household is not just one's household, and that one's family is not just one's family. The biggest problem is the sense of feeling disconnected, from each other and from nature." Richard, criticizing modern culture and the destructive views that dominate, argues that "we need to recognize the whole more, and not see everything as individual. Our egos blind us to things like nature, the whole, and the recognition of interdependence." Echoing this critique, Henry says of Ecovillage B, "we are just trying to live on the earth, imitate nature, and find alternatives to our culture of acquiring stuff." Ecovillage E has consciously developed around the ideals of "the dignity of life for all humans and respect for other beings on the planet." Conversations with various ecovillagers revealed the tangible sense that they belong to something bigger than just their own small human communities. Although, for most, humans remain at the top of the list of priorities, there is a larger sense of "we" at work, which includes a broader spectrum of people as well as other species.

The expanded notion of community does not stop at an intellectual understanding of being part of an ecosystem upon which one depends. This sense of community seems to be accompanied by a compulsion to act in accordance with that understanding. In other words, ecovillages exhibit a distinct ethic that guides their overall formation and the specific decisions made within them. An ethic, for Leopold (1949, 202), "has its origin in the tendency of interdependent individuals or groups to evolve modes of co-operation." In cooperating with one another *and* with the land community with whose members they share a home, ecovillages seem to demonstrate the ethical evolutionary progress that Leopold deems necessary. In other words, they have begun to develop a "land ethic."

Conclusion

Despite the increasing recognition of the need to study the interrelations between humans and the environment of which they are part, the social sciences continue to play a minimal role in ecological research. Specifically indicated is the need for insights into relevant systems of values and beliefs (Endter-Wada et al. 1998, 898). What is necessary, then, is greater attention to *how we think*: about the land, about ourselves in relation to it, and about the ethicality of what we do to the land and thus, directly and indirectly to ourselves. The ecovillage is a community model that operates under a framework distinctly different from the human exemptionalism paradigm. This alternative paradigm broadens the definition of community and provides different criteria for discerning right and wrong.

Like any ethic emerging from within an interdependent group and its evolving "modes of co-operation," it is fair to say that the land ethic is developing unevenly, and at varying speeds among different groups. It is, at present, prominent in ecovillages, but that does not mean that it will find its limits at the boundaries of these unconventional communities. Of course, there is no guarantee that a land ethic will ever mature into a significant influence over humankind, or even U.S. society. But many would argue (including ecovillagers and academics alike) that this is precisely what needs to happen in order to create a sustainable society, and perhaps to ensure the possibility of humankind sustaining itself at all.

The efficacy of scholarly efforts to revise the concepts that express the society/nature paradigm is unclear. Like the authors of these attempts, I believe that the conceptual tools available profoundly shape the ways people tend to make sense of the world. In that respect, one might argue that

ecovillages actually hinder the desired paradigm shift, reifying the division between people and "nature" in their frequent invocations of the word. A genuine paradigm shift, however, must come from more than words. I submit that the ecovillage is a powerful example of paradigm shift in process.

The ecovillage model suggests that the possibility of a sustainable society depends not only on what we do, but on how we think, and the understanding that these mutually influence one another. Concepts without practical applications are impotent, and actions not grounded in systems of belief are vulnerable to competing influences. The ecovillage paradigm is not only different from the dominant western worldview, it is an understanding of the world that is consciously articulated *and* embodied in ecovillage practices, relations, and the physical setting itself. The land ethic is an essential mechanism through which all this takes place, beyond technology, laws, and economics. In regard to the question with which we began — what does a sustainable society look and think like? — ecovillages suggest the necessity of a paradigm that facilitates a sense of community wider than the traditionally human one. It means that not only do people have a more accurate understanding of the complex interrelations between themselves and the land, but also that they feel obligated to steward the land that gives them so much. And this obligation is largely motivated by a conviction that it is the right thing to do.

Endnotes

1. Author to whom correspondence should be directed:
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2. In sociology, the "Environmental Problems Division" was officially recognized by the American Sociological Association in 1976. The Society for Environmental History was founded in 1977. In 1978, the philosophy journal *Environmental Ethics* was established and the Association of Environmental and Resource Economists was founded in 1979.
3. The word village connotes vague ideas of smallness, somewhere between a hamlet and a town. Ecovillages recognize and seek the advantages that small size provides. Largely motivated by the desire to establish a positive alternative to the likely futures that peak oil and climate change will bring for large cities, the versatility of village-size settlements is important in the ecovillage model. Small towns have some advantages over cities. In a drought, for example, a small town will benefit from even the briefest showers when captured in a water tank, but a dam requires substantial rain to create flows (Flannery 2005, 209). Power outages and interruptions in transport, likewise, are more severely felt in large cities, whereas infrastructures of energy and food provision that are smaller, less centralized, and nearer to its recipients are far more resilient.
4. This, and more, historical information is available on GEN's website, http://gen.ecovillage.org/.
5. Data in the *Communities Directory* is gathered through a question-

naire, completed on the Intentional Community website, by email, or over the phone. Though there is a space for descriptive keywords, the questionnaire does not delineate between types of communities, making inference on my part necessary. Conservatively, I count as "ecovillage" only those communities who identify with the keywords "ecovillage," "ecological," or "permaculture" because these indicate an explicit concern with human-ecosystem interaction. I exclude many groups that have an environmental focus, but do not explicitly invoke ecological interactions. For example, I do not include groups that identify themselves with the keywords "earth-centered," "land restoration," "nature," "stewardship," or "sustainability."
6. The "spiritual" component is invoked in very general terms. The words "cultural" or "personal" are often used interchangeably with "spiritual."
7. The phrase, "green space" has become common in land use planning language to denote "undeveloped," wild, or agricultural land.
8. Construction and demolition account for 20% of all landfill waste in the U.S., 43% (58 million tons) of this total is from residential projects (Johnston and Master 2004, 96).
9. Originally a Danish residential model, cohousing is gaining popularity in the U.S.
10. http://gen.ecovillage.org/activities/index.html
11. Of the seven components within the "social sustainability" aspect of GEN's Community Sustainability Assessment tool, one includes "diversity and tolerance; decision-making; conflict resolution."

Acknowledgements

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