BIOREGIONALISM:

BUILDING A LOCAL SUSTAINABLE CULTURE

Joseph A. Jacobson

An essay submitted in partial fulfillment

of the requirements for the degree of

Masters of Environmental Studies

The Evergreen State College

June 1992

This Essay for the

Master of Environmental Studies Program

by

Joseph A. Jacobson

has been approved for

The Evergreen State College

by

William A. Hashim

Bill Hashim

August 4, 1992

Date

Abstract

Bioregionalism:

Building a Local Sustainable Culture

Western civilized culture is a sinking ship, fouled with political and economic holes in its very foundation. It is time to bail out of the present paradigm, recognize its flawed characteristics, and jump aboard the life rafts of a new paradigm. Though the life rafts are small, there are enough of them, and they will carry the passengers to safety. Similarly, it is time to abandon global-scale world politics, while working to restore local culture based on ecological principles.

Our globalizing economy is about to founder under the weight of its own ballasted bureaucracy, its shell leaking like a sieve. Without reprieve, more holes are constantly being punched in the fragile hull of life support systems, ranging from the ozone layer to the loss of microbial life in the soil. We can continue to attempt to patch the holes, or we can decommission this tired and sinking ship before it crashes at the bottom of the ocean. The human race is in a similar plight now as powers of corporations and bureaucracies seem to be assuring the crew that by patching the damages, all will improve, and the human race will survive.

Analogies like this, however, are tenuous rationale for proving one's point: in almost every case, the analogy can be re-interpreted through other values. A stalemate is the result. It is better to attempt to provide empirical evidence, such as the number of pounds of soil loss to produce a pound of a crop, or the area of rainforest that is lost every day, or the disparity in income between the wage owner and the CEO, or finally, to count the number of people who starve because of inequities of distribution of land and its resources. The list of atrocities can go on and on, but we are all familiar with them by now. What can be done with this mind-boggling complexity of huge, global chaos being orchestrated by elite power groups?

Bigness. Bigness of polity, economy, and society. These are the roots of the problem. And until these are addressed, there is little chance that bandages will keep the ship from sinking. Bigness silences the voices of common people, while it creates artificial and sanitized needs for abstract economic theories. It accomplishes this by accumulating power centripetally to itself, robbing people and land of their power.

The process of change, for saving this sinking ship of humanity, or redesigning the ship, requires no new special knowledge nor superhuman ethical beings. Rather, it is observance to small scale that will help us remember our distant past, how our ancestors lived and

evolved into us. This remembering resides deep in the muscle-memories of all of us, but it takes a special prodding for it to be revived. We need to take the wisdom of the past and blend it with the practicality of the present to mold a future of self-reliant and interdependent communities. Attention to scale will allow democracy to flourish in every place of work, every town hall and council chamber, and every community structure or function.

In addition to these concrete organizational changes, more fundamental spiritual and cultural transformations are called for to provide the base for the theory of sustainable communities. The spiritual reawakenings to our connections and involvement in the complete processes of nature will realign our affections so that the necessary changes will, at best, completely reorient our society, and at least, provide the spark for steps in the right direction. All these changes will be authentic and seminal for the restoration not only of natural systems but also of local human culture.

Table of Contents

Chapter One

Introduction

Bioregionalism is a movement stirring the hearts and minds of people in all parts of the world. It is a movement to reconnect with the earth in harmonizing ways that have been nearly forgotten. Bioregionalism seeks to "re-create a widely shared sense of regional identity founded upon a renewed critical awareness of and respect for the integrity of natural ecological communities."[1] Bioregionalists juxtapose ancestral memories with contemporary gleanings from technology. Bioregionalism's goal is singular: to create and maintain local cultures that are indefinitely sustainable without degrading the natural systems that support all life.

At this precipitous stage in human evolution, where environmental crisis is the norm, bioregionalists aim to slow down the juggernaut of ever-expanding and often unnecessary technology, and remember origins and intimate relationship with a specific place on the earth, a place that we can call "home."

The bioregional vision provides a forum for discussing

---

[1] Sale, Kirkpatrick. "Bioregional Green." The Nation, June 16, 1984, p. 724.

ways to reconnect and rejuvenate our bodies and minds with a living place. For millennia, our ancestors have lived close to the earth in self-governing communities. Though not technologist, they had an intimate knowledge of their surroundings and an ability to communicate with and understand the forces of nature. Today, we treat nature as a commodity--for raw materials, recreation, and as a receptacle for our wastes. As we lay waste to the environment, we diminish our chances for long term survival. Delay in making swift, fundamental changes across the board in our ways of living on this planet may result in a halt in evolution for many species, including ours.

The fundamental changes amount to nothing short of a shift away from the present dominant paradigm of growth without end and technological advance without moral limitations. A new consciousness must ensue based upon conserving the vast information that is stored in the genes of the multitude of organisms that have evolved through the past millennia. Every species forced prematurely into extinction is a lost evolutionary encyclopedia for humankind. It also leaves another small hole in the web of life.

Bioregionalism attempts to understand that web of life by attending to the organization and scale of our communities. Is there empirical evidence that the

present way we organize our society and try to live out its ideology is not working? On one hand there is evidence to support the assertion that our present culture is degrading life support systems (especially in the case of the use of nuclear weapons); on the other there are those who argue that technology can solve any problem we create. Perhaps the evidence is not yet conclusive for humans to fundamentally change their nature-dominating ways. Will it take even wider decimation of life and will the effects of distressed ecosystems have to come knocking on the doors of the elite for there to be quick change? While the decimation marches on, bioregional ethics offer tactics to reorient our lives in tune with natural processes.

1. Purpose of this study. In this paper, I will explore the concept of bioregionalism as a path toward a sustainable culture. I will focus my attention and analysis at the community level--the level at which the tradition and spirit of decentralism can come to full fruition. I will also show that a community informed of bioregional concepts is a mirror image of a sustainable community. I will offer snapshots into this alternative paradigm by looking at the changes needed in our economy and politics, and in our view of land.

In order to begin to address these topics, we must

discover and then define our place on the earth; in other words, our bioregion. We all live in some bioregion, each one a geographic area distinguishable by its local hydrological and geological characteristics that create distinctive plant and animal life, and human cultural patterns (especially as displayed by indigenous tribes). Bioregionalism is "a process of learning to recognize the uniqueness of a place, and how this uniqueness instructs the formation and function of local culture." Bioregionalists propose a marriage of the knowledge gained by living close to natural processes and technological illuminations. This marriage in turn assigns tasks to the would-be bioregionalist that are simple to define, though difficult to accomplish. They include the following:

A. Re-inhabitation. This is loosely defined as learning to "live-in-place" in an area that has been disrupted and injured through past exploitation. Ecological revelations from scientific studies are the guiding operatives that will help us to:

> understand activities and evolve social behavior that will enrich the life of that place, restore its life-supporting systems, and establish an ecologically and socially sustainable pattern of existence within it. Simply stated, it involves becoming fully alive in and with a place. It involves applying for membership in a biotic

community and ceasing to become its exploiter.[2]

Shifting to a society where people become members of the biotic community will require basic changes in present day social directions. Clearly defining the boundaries of one's home is the first task. Restructuring local economic and political institutions that support all members in the bioregion must follow.

B. Living-in-Place. Living-in-place means "following the necessities and pleasures of life as they are uniquely presented by a particular site, and evolving ways to ensure long-term occupancy of that site."[3] Living-in-place is the learning that comes from careful and sensitive attention to hydrological, geological, biological, and cultural cycles manifested at the local level. Living-in-place requires respect for the area you call home. Learning to live-in-place entails developing respect for local knowledge. Political boundaries--county, state, province, or national--are irrelevant. People are but channels for the expression of the consciousness born out of the specialness and uniqueness of a place. "Welcome Home!" is the motto.

---

[2] Berg, Peter. "What is Bioregionalism?" Trumpeter, Vol. 8, No. Winter 1991, p. 1.

[3] Ibid.

C. Scale. One axiom crucial for the understanding of bioregional thought is the importance and necessity of drawing boundaries that define the complex, but homogenizing interactions between individuals and the land. These interactions involve all members of the biotic and abiotic community. It is from this perspective that we must learn to integrate our actions and settlements into the functioning whole.

Most ecology books do not talk about the bioregional level of integration with respect to ecological studies. This is probably because the bioregional model considers the incorporation of human culture into the landscape. The standard schematic usually goes something like this:[4]

Biosphere	↑	
Ecosystem	↑	
Communities	↑	Decreasing
Populations	↑	scientific
Organisms	↑	understanding
Organ systems	↑	
Tissues	↑	
Cells	↑	
Subcellular organelles	↑	
Molecules	↑	

The bioregionalists would like to insert another step between the ecosystemic and the biospheric levels in the above diagram to explain the functioning of local ecosystems which define one's nearby home. The leap from

---

[4] Krebs, Charles, J. 1985. Ecology: The Experimental Analysis of Distribution and Abundance. New York, New York: Harper & Row. p. 11.

ecosystem to the biosphere is made understandable by the bioregional level of integration. Therefore, the issue of scale is constantly on the mind and integrated into the actions of the bioregionalist. Only attention to scale can truly offer a unity of action and a florescence of purposeful guidelines that will result in a stable and growing life-place.

Bioregionalism attempts to incorporate ecological principles into the realm of human ecology in order to understand how we may transform our economics, politics, and culture to function with the ecological systems, "bioregions," we inhabit.

Chapter Two

The Value of Bioregional Thought

1. Introduction--The Value of Bioregionalism. The value of bioregionalism is to take an honest look at the results of our present economic, political and cultural institutions to discern whether they help or hinder the functioning of natural ecosystems. If they hinder ecosystem functions, then adjustments must be made. Whole ecosystems are being degraded: witness the annihilation of temperate and tropical rainforest; the desertification of once fertile croplands; the destruction of the great barrier reef and the list goes on and on. Lester Brown describes the deteriorating condition of the environment:

> Anyone who regularly reads scientific journals has to be concerned with the earth's changing physical condition. Every major indicator shows a deterioration in natural systems: forests are shrinking, deserts are expanding, croplands are losing topsoil, the stratospheric ozone layer continues to thin, greenhouse gases are accumulating, the number of plant and animal species is diminishing, air pollution has reached health-threatening levels in hundreds of cities, and damage from acid rain can be seen on every continent.[5]

---

[5] Brown, Lester et al. 1991. State of The World. New York, New York: W.W. Norton & Co. p. 5.

Clearly, this paints a picture of a natural world on the edge of disaster. Bioregionalists hope to articulate a reorientation of politics, economics, and culture that can convert our destructive powers into restorative powers. From the environmental standpoint, bioregionalists question present patterns of community design, land use, and water resource management.

Bioregionalist embrace the visions of placing the human animal back into the landscape as an equal member of the biotic community. This realignment of the human species into life-enhancing patterns may entail foregoing inane forms of entertainment, problematic reams of risk assessments, and unequitable distribution of the bounties of nature. Most centralized forms of management consider only the present cultural, economic and political options. They are not charged with the task of evolving true ecological communities.

Bioregionalism means moving away from the "rat race." The rat race is a race where we pit ourselves against nature; it is a race of controlling nature and its processes through technology. We are still running this race, hoping to overcome our self-made problems with yet more technological solutions. As we work to solve our self-made problems, the fundamental ones go unattended. As a result, we run against, instead of in harmony with, nature. While we make negligible

improvements in improving the quality of the environment, we remain blind to the requirements of healthy bioregional ecosystem. We get lost in marginal busywork, while our dysfunctional society trudges on. Now, it seems nearly impossible to alter its course.

The bioregional movement reexamined the "race," and has decided to identify with the turtle, who slowly, but steadily (and thoughtfully) plods on. In this way, the turtle revels in the journey without focusing on the glory of winning the race. If there is to be any correction in our path away from global degradation, it will be along the path, not the finish line. The turtle teaches us that life's wealth is found in the interactions with all the wondrous life forms along the path. What I am saying is that the pace of our industrial societies is too fast, leaving many people blind to the simple and meaningful constituents of daily life.

Moreover, bioregionalists see the fragmented pieces of a world wrought with degradation and inequities of human and nonhuman elements. The bioregionalists seek to establish a balance in the form of a new society with values and ethics that replace western liberal democratic epistomologies of how we view the world and how we interpret the data that our minds and senses receive. The bioregionalist seeks to rediscover those screens and

filters ground and polished from the long history of our race that help us perceive and properly interpret and live in unity with nature.

Bioregionalists strive to replace the opaque glasses that distort nature into a commodity with fresh (actually age-old) glasses that view the world much differently. Correcting our relationship with nature will entail some departure from the practices of western ideologies as we begin to build local cultures in a "geographic area having common characteristics of soil, watersheds, climate, and native plants and animals that exist within the whole planetary biosphere as unique and intrinsic contributive parts."[6] The goal of the bioregionalist is to appreciate and learn from all the parts that function in unison within a homogenous geographic area, or a bioregion.

2. Centralization and Community Loss. We live in a world of crisis. Despite the environmental protection efforts of national governments since the first Earth Day in 1970,

> ...the world lost nearly 200 million hectares of tree cover, an area roughly the size of the United States east of the Mississippi River. Deserts expanded by some 120 million hectares, claiming more land than is currently planted to crops in China. Thousands of plant and animal species with which we

---

[6] Berg, Peter. Proceeding of the Ish River Confluence, 1987.

> shared the planet in 1970 no longer exist. Over two decades, some 1.6 billion people were added to the world's population--more than inhabited the planet in 1900. And the world's farmers lost an estimated 480 billion tons of topsoil, roughly equivalent to the amount on India's cropland.[7]

Each day brings a fresh crisis as we strive to move materials from place to place to sustain community after community no longer able to support themselves. As a city population grows, its independence declines. More food, water, air, building materials, entertainment, clothing, and so on, must be imported. This creates a dependency that places the citizens at the brink of perpetual impending crisis. The systems of support the citizens depend on are so sophisticated and intricately connected to centralized powers that a calamity at any juncture would disrupt the city dramatically. It's like a juggler adding more and more balls into the juggling act. Sooner or later, there will be too many balls to juggle, or the juggler will tire from the constant strain, and all the balls will drop. Modern societies are fashioned after the over-zealous juggler striving for complexity when simplicity is sufficient; reaching for more objects to juggle, when even the basics of human and ecological needs are lacking. Environmental mitigation, economic growth, international competition and free

---

[7] Brown, Lester, et al. 1991. State of the World. New York, New York: W.W. Norton. p. 3.

trade, and a hundreds other factors point the juggling act toward collapse.

I liken the juggler to a community, or some version of a community, that has mutated away from real community interdependence and trust into assemblages of commodity self-maximizers enslaved to their providers from without. Centralized powers have forged the chains that enslave citizens to uphold a global vision of an ever-expanding technological world. Wouldn't it be wise for a community to discard most of the superfluous balls in their juggling act, and depend more upon their own resources to solve their problems in a locally informed manner--in a way that creates a local culture in tune with the local environment?

Some people feel one way to break the chain of globalism is to link rural and urban areas. Rural farms would grow the food for the urban dwellers, while the city would provide manufactured goods (tractors, appliances, televisions, etc.) to the rural dwellers. This seems like a good deal for both parties at first glance. If a place is to inform its residents of its attributes and necessities--its soils, water, flora, fauna, and land forms--then how is the urban dweller to come to an understanding of the full processes of the web of life when many of these elements come from far away, both in terms of distance and experience? How will the

person who is not in touch on a day-to-day basis with the land, be able to become an active member in the health of the bioregional community?

I think that each local community must function like a self-sufficient ecosystem, providing its own needs in the complex web of life connections it must weave. Wendell Berry said,

> The loss of local culture is, in part a practical loss and an economic one. For one thing, such a culture contains, and conveys to succeeding generations, the history of the use of the place and the knowledge of how the place may be lived in and used. For another, the pattern of reminding implies affection for the place and respect for it, and so, finally, the local culture will carry the knowledge of how the place may be well and lovingly used, and also the implicit command to use it only well and lovingly. The only true and effective "operator's manual for spaceship earth" in not a book that any human will ever write; it is hundreds of thousands of local cultures.[8]

A bioregional community is a living place, a complex web of animate and inanimate interactions that, among other things, help create local culture. Rather than have a few cities of a million people, it is more ecologically viable to build a million small villages with local cultures that understand the expectations of their bioregion.

In order to reorient communities along the lines

---

9 Berry, Wendell. What are People For? San Francisco, California: North Point Press, 1990, p. 166.

of self-sufficiency, we must begin rebuilding and retrofitting present cultures into new cultures that will modify behavior to fit the local ecology. This can only begin as people take control and ownership into their own hands, and start making the fundamental changes that are required. We must see the environmental movement as more than a special interest. It must become integrated into our daily lives as we learn to know and depend directly on the resources around our homes. We must become bioregionalists.

3. Beyond Environmentalism. Recently, there has been a backlash against environmentalism. Out of work loggers, politicians, industry, and pro-business dynamos are the most vocal opponents. The anit-environmentalists may be feeling the pressure of governmental intervention in what they believe to be their "god-given" individual right to private enterprise and land ownership. Classic environmentalism (that is, the struggle for saving pieces of the environment while not addressing deep societal or ideological change) is seen as the nemesis of economic potential and individual accomplishment, not by those imposing the laws, rules, and regulations, but by the ones ruled and regulated. Thus, environmentalists accomplish marginal victories in

holding back the "total" annihilation of the environment, yet simultaneously stifles the human ingenuity and confounds the goals of community self-sufficiency. For example, environmentalists use the power of litigation and politics in an arena of centralized power struggles to accomplish its goals. Meanwhile, local culture takes a back seat role in their own affairs.

Classic environmentalists are on the defensive, struggling merely to stay at the heels of the constant onslaught of a western ideology playing havoc with environmental quality: society's marginal improvements in cleaning up the environment have not eliminated degradation of the earth. Meanwhile, the endless studies needed for risk assessments and the nature of cumbersome and bureaucratic lawmaking, allow for temporary and tenuous policies that merely help our culture cope with living in this world. Compromises and negotiations between environmentalists and exploiters of nature present, at best, pockets of segregated land, like museums, to remind us of the magnificence of wildness; at worst, it ends in stalemates that result in incremental losses until there is nothing left to fight over. The bioregional movement is the shift away from the struggles at the power centers of politics to the regeneration and

restoration of land and people at the local level--the bioregion. Beginning this shift first begins by defining a bioregion.

Chapter Three

Defining a Bioregion

1. Introduction. I want to view the process of defining a bioregion in terms of all the participants: humans who manipulate natural elements into purposeful objects; animals who directly use the elements as found in nature; and the raw elements themselves. All participate in the ebb and flood of energy cycling through land, sky, and water. It is necessary to characterize all these elements in order to make the decisions that determine how the human element will function within the bioregion. Animals cannot speak to us, and neither can the plants and rocks (at least most people cannot communicate with them). Therefore, we need to gradually, but as quickly as we can, make our way back to understanding the heartbeat of the land under our feet. By this I mean taking more time to listen and commune with the earth. This can happen if, by design, we create communities that interact closely with nature, integrating our day to day actions with natural patterns.

Participation is the operative key word here;

participation not only in some general sense, but in a specific sense of growing one's own food, restoring plant and wildlife communities, and listening to the voice of the earth. More people participating in local self-reliant activities will transform the centralized media and government into locally-controlled entities supported by the whole community. The agenda of the power bureaucracies--the creation of a stultifying dependency that promulgates biased information, loss of self-determination, and the impossibility of local people providing even their basic human needs of food and shelter--will disappear. Renewed local cultures will begin to develop within every bioregion that gains this freedom.

The process to get to know the geography of a region can be taken in two steps: first is through the power of observation, the gifts of eye, ear, of taste, smell, and touch. This in turn is coded into the memory that allows for a deep understanding of our place in the landscape. Second is the transformation of the observations into social and cultural mechanisms that will ensure the landscape's integrity. Barry Lopez explains the importance of observation:

> For as long as our records go back, we have held these two things dear, landscape and memory. Each infuses us with a different kind of life. The one feeds us, figuratively and literally. The other protects us from lies and tyranny. To keep

> landscapes intact and the memory of them, our history in them, alive, seems as imperative a task in modern times as finding the extent to which individual expression can be accommodated, before it threatens to destroy the fabric of society.[9]

These coded and remembered practices develop into the necessary social and cultural mechanisms to assure a healthy ecosystem through the generations, such as preserving remaining wild areas, building sustainable communities, and enhancing social equity.

I think what Barry Lopez says is that the "expectations" of the land are known by those people who live in its presence. This first hand experience is gained by living in close proximity to the landscape. If the memory of how to live properly in each specific place is lost, then the fabric of society will suffer because there will not be the continuity of experience that can guide future habitation of the site and guard against the "lies and tyranny" of improper habitation; that is, interference in the landscape's natural tendency for regeneration.

To really know the history of a landscape means that we <u>live</u> in the landscape. If we are to live in the landscape, we must sense its richness, its potential, and its limitations. We must begin with knowing its boundaries.

---

[9] Lopez, Barry. <u>Ideas</u>, February, 1990, p. 44.

2. Drawing the Boundaries. The process of drawing boundary lines starts with overlaying various sets of natural science data, including watersheds, animal communities, vegetation types, geomorphology (e.g., tectonics), physiography (e.g., landforms caused by waterways and glaciers), and other factors depending upon what is appropriate for each bioregion. Each of these elements are the building blocks that differentiate bioregions and thus help the bioregionalist delineate boundaries.

One of the most common and simplest methods for discovering a boundary line is to imagine the drainage basin in which you live. If you were to imagine rain falling on the topography of the landscape, to what common outlet would the water run? Likewise, if a pollutant enters a basin upstream, where will the pollutant end up? Will it be the drinking water for a downsteam town? Or will it enter an estuary to damage fish populations? These are some of the questions that help define a watershed as a self-regulating catch basin based on linked habitats and co-evolving natural and human communites.

Watersheds thus represent both a unity of landscapes from high ridges to low valleys and a temporal wholeness found in the hydrological cycle. A

watershed has two energies: the energy of gravity and the energy of the sun.[10] Gravity pulls water and earth down to the sea. The sun evaporates the sea water into clouds; gravity pulls it down again to the land. Similarly, volcanoes and plate tectonics return the earth back to the land (again related ultimately to solar power). Water and earth are never lost, just reshuffled through the bioregions.

Another methodology for preliminarily envisioning a bioregion is to observe the physiognomy of the flora in the landscape. A forest will be recognizable as a forest, perhaps for its multi-canopy appearance (spatial effects) as well as its change through the seasons and years as plant species move north or south or even through geologic time as glaciers advance and retreat (temporal effects). Likewise, a desert will present recognizable differences based upon its plant associations. Somewhere between the forest and the desert lies a zone of change, an edge, a boundary. The use of physiognomy is one way to begin the process of recognizing and defining the boundaries of one's bioregion.

The result of the overlays of natural science data will begin to delineate bioregions with no reference

---

[10] Warshall, Peter. "Streaming Wisdom," The CoEvolution Quarterly, Winter 1976/77.

point for human occupation. In order for the delineation to prove useful for the human inhabitants, further overlays must be superimposed on the natural science overlays that allows for interactions between all the players: the land, animals, plants, water, air, and people. It is the human task to design systems of sustenance that do not degrade the physical elements of the landscape, both at the local level and the watershed or bioregional level of influence. By combining natural science data about the land with the human cultural information, both past and present, we will start to define rough bioregional boundaries that present similar challenges to all living creatures within its borders.

When all the natural and cultural information of a region is gathered and overlayed on a base map, a distinctive pattern or "homogenity" begins to appear. This homogenity will determine the web of live that can survive in this habitat, given the specific soils, climate, and water resources available.

So how does a "re-inhabitant" go about discovering the local bioregion and drawing its borders? First, we must realize that a tremendous amount of information must be collected. Some of this information may not be cataloged and will require the inquirer to begin observing the landscape firsthand. Some data will

cover great areas, such as geologic information, while other data requires site specific observation, such as plant associations (physiognomy).

Second, we recognize that homogeneity is based on a low variability of commonly-shared characteristics. This is turn defines a bioregion. That is, a majority of areas within a bioregion will represent the characteristics chosen to define this particular bioregion. This method is based on regional patterns reflected in combinations of spatial and temporal characteristics, including climate, mineral availability (soils and geology), flora and fauna, and physiography. The resulting ecosystems will assemble these characteristics into distinct patterns of homogeneity.

This idea of homogeneity, which is the crux of a bioregion definition, involves all the participating life forms (and non-animate elements) including humankind. The human element becomes one of the characteristics that define a homogeneous region. For the bioregionalist, homogeneity includes a synthesis of human culture and all other non-human life.

3. Components of a Healthy Bioregion. If we accept the premise that homogenous bioregions will offer specific building blocks and constraints to lifeforms within its

borders, then we must also see that a great diversity will arise from a collection of bioregions. A bioregion as defined in the last section (Drawing the Boundaries) can cover both a vast area or the local drainage basin. Therefore, a bioregion can be defined in terms of a small stream drainage basin or a major river basin, depending upon the human cultures that inhabit the bioregion. Thus, diversity between bioregions will also lead to diversity and richness of all species within a bioregion.

We have witnessed the disappearance of indigenous tribes from probably every inhabitable bioregion on the face of earth. We are left with a global, human monoculture conceived by political dictates, while diversity of natural systems and human culture (defined by ecology) is squeezed out at the bioregional level.

If a collection of diverse cultures is desirable, then it seems that self-managing communities must be encouraged, just as diverse ecosystems are evident across the face of this and all continents. Homogeneity, then, works well not only for defining an bioregion in the physical sense, but also as a guiding force in cultural development for appropriate human settlement on the land. In order to cultivate diversity of human cultures, we would have to take into account the many factors that delineate a bioregion.

We must find ways to interact with ecosystems without degrading them. In other words, we must function integratively with ecosystems within the bioregion.

The next question to ask is: why do we desire diversity in cultures? Humans are not immune to the laws of evolution and adaptation. For millions of years, we have been going through this process. Thousands of different cultures had evolved in separate bioregions, adapting to the thousands of different environments which have presented the raw materials for building sustainable cultures.

The theory that diversity leads to stability is a debated subject within the field of ecology. Elton suggested the following evidence in support of this theory:[11]

1. Mathematical models of simple systems show how difficult it is to achieve numerical stability.

2. Gause' laboratory experiments on protozoa confirm the difficulty of achieving numerical stability in simple systems.

3. Small islands are much more vulnerable to invading species than are continents.

4. Outbreaks of pests are most often found on cultivated land or land disturbed by humans.

5. Tropical rain forests do not have insect outbreaks like those common to temperate forests.

6. Pesticides have caused outbreaks by the

---

[11] Elton, C. The Ecology of Invasions by Animals and Plants. Methuen, London. 1958, p. 138.

elimination of predators and parasites from the insect community of crop plants.[12]

The simple and intuitive reasoning of diversity causing stability is not, however, born out in the experimental investigation. The experiments are performed within just a couple trophic levels and with only a few simple organisms, like bacteria, Paramecium, or predatory protozoa.[13] Similarly designed experiments are not possible to perform in the real world, especially in the most complex ecosystems like tropical rainforests.

The hallowed tenet of community ecology that describes a causal relationship between diversity and stability is not presently able to be invalidated. Thus, I accept, intuitively, the fact that an old-growth forest ecosystem will be more stable than a monoculture of corn or soybeans grown in Iowa.

Since we now can say that this forest system will survive perturbations better than the corn field, and will do it in a self-managing way, can we make some statement about diversity within the human species? First of all, we should recognize that humans are not as easy to understand as bacteria or paramecium. The

---

[12] Krebs, Charles, J. 1985. Ecology: The Experimental Analysis of Distribution and Abundance. New York, New York: Harper & Row, pp. 582-3.

[13] Ibid., p. 583.

question that I originally posed, and one that the bioregionalist must consider in designing communities, is whether we can extrapolate from ecological hypotheses to sociological conclusions about cultural diversity. I will attempt to do so.

If you take a look at a species that inhabits many places on the face of the earth, in vastly different bioregions, you will find that the species has the ability to adapt to local conditions, and take on characteristics quite different from its relative in another region. This adaptation can result in a new species (in the case of evolution on an island) or in genetic varieties within the same species (known as ecotypes).[14]

The lodgepole pine is a good example. It is the only conifer that is native to both Alaska, Baja California, and points in between. There are three varieties of this pine: Shore Pine, a small crooked tree found along the coast in the north; Sierra Lodgepole Pine, a tall, narrow tree growing from southwest Washington to northern Baja; and Rocky Mountain Lodgepole Pine, also a tall, narrow tree but with long needles, found in the Rocky Mountain region.

These three varieties are the same species that have adapted to their local environmental requirements

---

[14] Ibid., p. 90-91.

by developing different forms, needles, cones, and even fire retardancy, as in the case of Rocky Mountain Pine, which disperses its seeds when the heat of a forest fire cause the cones to open.

Similarly, humans have adapted physically to different environments. The Eskimos of the far north developed a thicker layer of fat to help keep them warm; the people of Africa adapted to intense sun and temperature with the color of their skin. All these adaptations were in response to varying environmental factors found in different regions. This is the natural way that all species act in accordance with the natural world. This results in a diversity of the human species.

But this needs to be carried one step further for the human species. If we take a look at the cultural adaptations and differences in different regions throughout the world, we also find diversity. Cultural diversity must coevolve with ecosystem diversity since humans are part of the whole.

I assume that the different demands of the physical environments was the driving force in cultural adaptations as well. Since diversity in cultural patterns has been the norm for thousands of generations of our species, it becomes irrelevant to ask if diversity is desirable: it just happens, naturally.

Since cultural diversity happens naturally, and the diverse cultures of the past have survived for so long, it follows that the human species is stabilized by diversity. That is, the abundance and distribution of humans would not tend toward extinction. If one culture died off, it would not jeopardize the whole species.

Today, the situation is quite different. We may have wide abundance and distribution, but many of those people are dependent upon a centralized provider. One species, the homo sapiens economicus variety, is dominating the whole globe. This one variety has become so influential, it has the capacity to destroy the whole human species, as well as a multitude of other species types.

Thus, the human species is part of diversity at different levels: at the level of the community, interacting with many other species; at the level of the bioregion, forming more or less similar human cultures based on the similarities within the bioregion; and at the global level, in developing a mosaic of cultures based on dissimilar physical constraints.

Chapter Four

In Defense of a Bioregion.

The globally-conscious persons might think that redefining boundaries to smaller units according to ecological principles will return us to barbaric tribalism or myopic parochialism. Their major argument is that a world without borders, in essence a "One World Family" or a "New World Order," should be encouraged in order to eliminate the political fallout of nation against nation in constant struggle or war over their boundaries. Bioregionalists counter by offering the following political and ecological arguments.

1. Political Argument. There are three problems with identifying political conflict as a boundary conflict.[15] They include cause and consequence, conflation of nations with state, and ignorance of scale.

First, consider the cause of political conflict.

---

[15] McCloskey, David. 1989. "On Ecoregional Boundaries." Trumpeter, Vol 6, No. 4, p.127.

It seems to me that the boundary around one's territory can only come after its inhabitants have learned how to live in that area. The bioregional hypothesis describes small units of settlements that can live in harmony with the land. The consequence, therefore, of boundaries would be inclusive instead of exclusive. That is, those who live in one distinct bioregion would have no need to dominate other bioregions. This means that the boundaries would not serve as a source of conflict, but as a natural limit to activities of its encircled residents. Conflict over boundaries would more likely be over arbitrarily-drawn, politicized borders, such as are drawn after wars.

Second, the rise of nation-states provides for the buildup of resources necessary for massive violence between territories. Nation-states are thus able to suction a great depth of natural and human resources into unsustainable warlike activities against other regions and the environment. By encouraging self-reliant bioregional cultures, we are discouraging boundary conflicts since the inhabitants are not requiring the resources from distant bioregions.

Third, by removing the bioregional boundary defined by nature in favor of a global and monocultural world-order, we would be inviting centralization on all fronts--standardization, bureaucratization, and

technical rationalization: standardization by instituting monocultural and monolithic models for society; bureaucratization because of the preponderant size of the administration needed to implement the standardizations; and technical rationalization as a result of having created a gigantic society that is dependent on technology just for day-to-day operations. We will be rationalizing actions that are not truly making headway in solving environmental disasters, rather only staving off collapse of human and natural ecosystems.

The scale of the globalists is necessarily not devoted to the natural processes of one bioregion. If one area is exhausted, then the global enterprise simply looks for greener pastures that can replace their own exhausted resources. The founding of this country is a good example. The elite class of Spain needed more wealth, and so had to turn to new lands to exploit. This form of imperialism is continued today by international corporations and nation-states. Imperialism destroys local cultures, community homogeneity, primordial ties of kinship, and the integrity of the earth's diverse species, habitats, and resources. The best proof of this assertion is found in examining the small scale of native cultures throughout the world. Most of them had built-in

rituals that tended to preserve the wealth of the landscape with little degradation.

> What is needed to ensure the fate of nations and the Earth is to decrease scale: to decentralize to smaller regional communities so as to localize inevitable conflict, and keep them from endangering the whole irredeemably.[16]

Thus, it is the bioregional adherence to the importance of natural boundaries that alleviates political conflict while encouraging diversity. "Without a rich diversity of peoples and places, species and habitats, there can be no freedom, no right to be for species, persons, or communities."[17] This freedom or "right to be" is a biological principle that recognizes the way separate organisms express their distinctiveness in a setting of diversity. In order for the human animal to have the political freedom of self-governance, available places must be available for taking root on the land that encourage ever-changing diversity of peoples, regions, and their conflicting traditions.

2. Ecological Argument. Nature is multi-dimensional. The land has boundaries, transitions (edges), and limits. To ignore the natural boundaries of the land is to lose its instruction in helping us to understand

---

[16] Ibid, p.128.

[17] Ibid., p.128.

the places we inhabit.

We need to recognize the exchanges that characterize and differentiate ecosystems. The boundary between ecosystems, and indeed, between all entities, whether it is cells, organisms, communities, persons, or cultures, is less a barrier than a permeable membrane which regulates energy and information exchanges through the boundary to maintain or generate life processes.[18]

At the biospheric scale, the atmosphere, lithosphere, and hydrosphere endlessly cycle air, earth, and water, creating fronts, zones and streams which meld fluid boundaries into living, building blocks. The bioregionalist observes these harmonious elemental relationships, and tries to find ways to least disrupt it, or better yet, to fit into its rhythms.

A boundary consists of continuous and flexible borders that mark the transition to another ecosystem. This border or margin

> ...sets a frame to perception, identity, and action, and links us, in turn, to larger contexts. Borders set out the terms of relationship joining the "within" and "without." The bound is the limen or threshold, a door through which we come and go.[19]

---

[18] Ibid., p. 128.

[19] Ibid., p.128.

The bioregional boundary carries the power of a line that brings together multiple ecosystems into bioregions, which in turn form the biosphere. Bioregions on each side of the border line receive the same natural global cycles. For example, the mountainous ridges, found aplenty in the Ish River bioregion, serve as pivotal borders that unify adjoining bioregions: the ridge divides while it brings together the ecosystem and acts as both a periphery of a single bioregion and the center of two bioregions.

Bioregional boundaries are defined by the ecological characteristics of soil, watershed, climate, native plants and animals, and human occupancy patterns. It is a region of geography that is first determined by the natural sciences, and finally, by the people who have actually lived in that place. Hence, a bioregion refers to a homogeneous physical place and the ideas that have developed on how to live in that place.

Analyzing regions by their geographical terrain and "terrain of consciousness" is, in a sense, a modern invention borrowing from the science of ecology. Since most people around the world have become detached from the land and their ancestor's memories of the land, we now need to start from scratch, in a sense, to rediscover how to live with rudimentary processes and

products of nature. It may be useful to survey how much we as individuals and communities know of self-reliance (that is, living ecologically) in the natural systems we inhabit. Once we have made this reconnaissance survey of our skills to live in this native place, we must learn to "re-inhabit" our home:

> Re-inhabitation means learning to live-in-place in an area that has been disrupted and injured through past exploitation. It involves becoming native to a place through becoming aware of the particular ecological relationships that operate within and around it. It means understanding activities and evolving social behavior that will enrich the life of that place, restore its life-supporting systems, and establish an ecologically and socially sustainable pattern of existence within it. Simply stated, it involves becoming fully alive in and with a place. It involves applying for membership in a biotic community and ceasing to become its exploiter.[20]

To become a "member of a biotic community" is at the heart of the science of ecology, where all elements in the ecosystem determine function and structure.

3. Imagining the Potentials of a Bioregion. It may assist us to imagine that all people and their structures are removed from the land; asphalt parking lots covering prime farmland, malls selling unnecessary and out-of-the-bioregion products, airports, freeways,

---

[20] Berg, Peter. "What is Bioregionalism?" Trumpeter, Vol. 8, No. 1, Winter 1991, p. 6.

skyscrapers, and so on. This needs to be done so that we can realize or imagine the full potential of the land without the exploiting practices of humankind. People need to have intact ecosystems in order to fulfill their people-hood, and to grow with the rest of nature. In many areas of the world, there is no evolution taking place, rather, development is leading toward accelerated extinctions. Therefore, it makes sense in the method of science, to first look at the foundations of all life, scope out its potentials and influences on the human animal, and then attempt to insert appropriate human systems back into the landscape.

Imagine what would happen in this hypothetical scenario if humans were gone. Seeds would be brought in by bird and wind to start regenerating the land. Life processes would have a vast open landscape to pioneer and reclaim. Rivers would run free, fish and animals would move into niches and populate themselves. Eventually, in a few hundred years, the once simplified (biologically speaking) human system of concrete would be a stable, complex, and magnificent forest that would represent the biological capability of this bioregion.

At this juncture, humans are reintegrated back into the landscape intent on blending into the patterns characteristic of this stable ecosystem. The goal

would be to have minimal effect on this regenerated forest ecosystem, while finding ways to adapt culturally to the new home. This would give the people a true opportunity to create a society that heeds the carrying capacity of the land based upon a stable and complex natural system.

This regenerated forest system would resemble an old growth forest. Its stability and high productivity would teach us how to design our settlements in such a way as not to upset its complex balance of organisms. This would mean that we would have to adopt "old growth" mentality and strive to align ourselves with ethics that support this forest system. In other words, we would have to live more interdependent with this local ecosystem, and recognize the carrying capacity of the land.

I think it is crucial to act out this scenario in order to reacquaint ourselves with the vision of the best of all possible biotic richness that this or any land can produce if given the chance. We have the option of being satisfied with a degraded and stunted environment or striving for an abundant and thriving ecosystem. We have to get beyond the thought that we must work only with the ecosystems that are remaining. Instead, we can "let the original face of the place shine through--rivers, mountains, and valleys,

coastlines and plateaus, sea and sky."[21] In listening to the spirit of these revived places, we will be able to pay closer attention to their special character, and their stories.

---

[21] McCloskey, David. "On Ecoregional Boundaries," Trumpeter, Vol. 6, No. 4., p. 130.

Chapter Five

Philosophical Support of Bioregionalism

1. Introduction. The bioregional paradigm mirrors the structures of governance found in natural ecological communities. Ecosystems function best when left alone, without interference, or management by people. Moreover, it is unnecessary for humans to take a dominant role in determining ecosystems function. Thus, our political systems should be reflections of the forest, prairie or desert ecosystem "without coercions, without organized force, without recognized authority."[22] There is no final authority in nature, only the random interactions of all ecosystem elements working cooperatively to build a richer ecosystem.

The chaotic processes of nature do not exhibit centralization, hierarchy, or homogeneity within the ecosystem. So why should we include these principles in our form of governance? Lest we think that this is simple-minded, naive, or utopian hopeful thinking, we should remind ourselves that the vast majority of human

---

[22] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985, p. 90.

organization over the past two million years have embraced decentralist political self-governance. The modern nation-states which reduce people to experimental units for statistical analyses performed by the machinery of the state, and whose biased conclusions favor the interest of the few and enforce policies and rules for the many, have only occurred in the past two hundred years or so. In the final analysis, the best government may be no centralized government, as born out by societies through time immemorial. As Kirkpatrick Sale puts in his important book Human Scale:

> Examples of societies that have lived, and lived long and well, without the trappings of the state are surprisingly common, once one begins combing through the scientific literature. In fact they are so common, occurring right throughout the Indian societies of both North and South America, through much of North Africa and almost all of the great region from the Sudan to the Kalahari, and throughout the islands of the South Pacific from Sumatra all the way to Polynesia, occurring among patrilineal as well as matrilineal societies, settled and pastoral as well as hunting and nomadic, large and scattered as well as small and cohesive, isolated and ingrown as well as confederative and cooperative, occurring in such variety and profusion that it comes to seem from the anthropological evidence that this is indeed the basic natural organization of human societies. As British anthropologist Aidan Southall has said about the historical spectrum, "People with state

organizations were exceptional."[23]

What Sale suggests is that perhaps our national governments, which have successfully homogenized diverse societies into disneyland outposts, are not in the best interest of the human animal for utilizing his/her potentials that our long specific evolution has given us. We need only remember the training ground of our tribal past to see our potentials today.

Bureaucracies have failed because they have not encouraged equality for all people, respect for ecological wisdom, or decentralized decision-making. They are only bandages that help our industrial society cope with the troubled world we have created. We have all the knowledge and skill right now to turn this planet into one huge garden of Eden, but the political will is missing. We have gotten our societies into such dysfunction and despair, that to get us out of economic disaster in the short run may entail long term environmental degradation.

Some headway has been made in curbing the steady march toward environmental degradation. Environmental laws and regulations enacted to mitigate the harmful and undesirable ecological damage accompanying practically all our actions to support our communities

---

[23] Sale, Kirkpatrick. Human Scale. New York, NY: Coward, McCann & Geoghegan, 1980, p. 456.

are not founded on ecological wisdom. They are not capable of integrating the complex webs of life because of the following reasons:

1) The laws generated are not self-managing rules of conduct, but meant to control the actions of many individuals through policing, fines, and threats from above

2) The laws are only addressing the symptoms and not the causes, thus placing human primacy above human interdependence with the natural world, and

3) The rules are not themselves a natural outgrowth of human-scale societies and therefore cannot propose human-scale solutions.

I think that one needs to remove oneself from this urgent moment in order to envision a comprehensive view and understanding of the problem. In order to do this, it helps if there are models throughout the history of humankind that can offer solutions to present predicaments. Inspiration will come from various disciplines to form a cohesive upwelling of supporting ideas for remaking society, for concrete and practical thoughts. Sale calls these thoughts the bioregional laws of polity.[24]

2. Decentralism. The ecological theme suggests that there is not a centralized power of any one group either within a species or between species. All

---

[24] Ibid., p. 91.

members in a biotic community behave according to the guiding central laws of nature, not the "command" powers of any one species. This spreading of power to small and widely dispersed units has also been the case for the human animal through all history. The anthropological studies show that tribes have functioned best at a population of about 500-1000 people.[25] Up until this century, few cities exceeded 1 million residents.

The question of centralized, governmental power is only a fairly recent phenomenon reaching back a couple thousand years B.C. Before this date, and even after this date in the majority of cases, people worked their governing problems in small groups because they lived in smaller units. With the face to face contact and intimacy not prevalent today, societal norms could naturally monitor and subvert any abnormal behavior of individuals in the tribe.

Looking again to the study of ecology, we see species that are basically looking after their own benefit and survival, not in terms of establishing power over other species, but in establishing their territory and defending their offspring and niches. This is not the same as seeking command and rule over

---

[25] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985, p. 129.

more resources than necessary. Predation is but a continuous dance of life and death, of feeding and being fed, of eating and being eaten, of participating in the endless cycling of energy and matter through the natural systems in which they live. This is not power in the way people agglomerate resources and enslave wage earners to labor in exchange for subsistence remuneration; not democratic by a long shot.

Similarly, human patterns of decentralism, of visceral urges to separatism, independence and local autonomy are the norm. According to Harold Isaacs, professor of international affairs at MIT, the innate human drive toward decentralism and dissolution of the large societies has been shown throughout history and continues to be the natural tendency:

> ...that declines could take a long time and falls long overdue, but that these conditions could never be indefinitely maintained. Under external or internal pressures--usually both--authority was eroded, legitimacy challenged, and in war, collapse, and revolution, the system of power redrawn.[26]

What Isaacs seems to be saying is that even if a society seems overwhelmingly successful, like Rome or the United States, it may be due for a crash. The reason, he asserts, is that there is a natural tendency

---

[26] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985, p. 94.

toward dissolution of authority and power within a society. Even in our age of globalization of culture, economy and politics, Isaacs sees empires and nation-states breaking down into autonomous clusters. He notes:

> What we are experiencing, then, is not the shaping of new coherences but the world breaking into its bits and pieces, bursting like big and little stars from exploding galaxies, each one spinning off in its own centrifugal whirl, each one straining to hold its own small separate pieces from spinning off in their turn.[27]

The bioregional vision, therefore, draws lessons from past and present examples of the decentralization of institutions and diffusion of power. The vision recognizes that authority and control must remain within the community. Distant authorities do not respect bioregional affections that build local cultures. Decisions affecting any community should start from the bottom-up, and probably be solved long before reaching out of the bioregion to national or global decision-makers.

Based on tribal patterns of self-governance the world over, Bill Mollison describes what general behavioral patterns can be expected with increases in human population size:

---

[27] Ibid.

- 1-3 people: Executive decision, least meeting time, greater pressure to act, fast changes possible, fast replacement of key people.

- 4-6 people: Good volunteer or cooperative group work, or work group for special single projects; good size for work exchange systems.

- 7-20 people: Function well only in social conditions; can be a recreational group or team, but at 7 or so, a chairperson is needed and decisions are slow and frustrating, often creating dissent.

- 30-40 people: Acknowledged as the minimal group of people in which most human functions can be covered, and who (if well chosen) can cope with almost any type of problem.

- 40-200 people: Rarely found as a group or settlement, but a good size for a regional organization.

- 200-300 people: the basic number for genetic variability; such a group can, by careful breeding, maintain their numbers as a tribe and allow for some losses to disease. Probably the minimal human village size (called a hamlet).

- 300-400 people: About the limit at which people know every other person by name; thus, about the limit of "identity." This the largest satisfactory size for educational or learning systems if personal attention is valued. Acknowledged to be the upper limit for successful cooperatives for real participation.

- 400-5,000 people: Usual upper limit of federations of tribes; a good size for a bioregional group or subregion. Also, a village size limit. Cliques, theft and cheating common and possible; hierarchies are needed.

- 7,000-40,000 people: Towns, large bioregions. Chinese communes start about here. This number is not satisfactory unless broken into small cooperatives and villages. Crowds and very large audiences can reach this size, and can be difficult to control if aroused. It is about the upper limit for any real control by strict hierarchical systems.

- 40,000-10,000,000 people: Cities; mainly disorganized on every level. Effective anarchy and crime, and social isolation in many areas.[28]

The important point of Mollison's study shows a general tendency toward unmanageable complexity in social problems as the populations grow. While the society tries to solve the problems they create, the real problems are put on the back burner or ignored entirely until the national debt is paid off, people are put back to work, or the 50 billionth MacDonald's hamburger is sold and digested.

Following the bottom-up approach to organizing and managing our societies, then, we can see according to Mollison's way of thinking that the close-knit village of up to 1,000 people is best able to make decisions for themselves. They will know best the environment in which they live, and since the human settlement is informed first by its physical environment, governance will begin here. According to the bioregional view of human settlements, this well-informed government will do the best service for its inhabitants; even if the decisions are not of the best caliber and cause some disruption of either people or environment, the damage will be localized and attenuated by the size of the

---

[28] Mollison, Bill. Permaculture: A Practical Guide for a Sustainable Future. Washington, D.C.: Island Press, 1990, p. 531.

village.

Sale maintains that the bioregional form of governance found in the decentralist division of power is best suited for the job demanded of 20th and 21st century societies:

> It [20th century government] promotes liberty by diminishing the chances of arbitrary government action and providing more points of access for the citizens, more points of pressure for affected minorities. It enhances quality by assuring more participation by individuals and less concentration of power in a few remote and unresponsive bodies and offices. It increases efficiency by allowing government to be more sensitive and flexible, recognizing and adjusting to new conditions, new demands from the populace it serves. It advances welfare because at the smaller scales its is able to measure people's needs best and to provide for them more quickly, more cheaply, and more accurately. And, because of all that, it actually improves security because, unlike the big and bumbling megastates vulnerable to instability and alienation, it fosters the sort of cohesiveness and allegiance that discourages crime and disruption within and discourages aggression and attack from without.[29]

3. Self-sufficiency. Assuming self-sufficiency in tribes or families living in nearby bioregions, we expect to see people depending fully on their region's natural endowments. They would have little need for war with neighboring tribes. If conflict did break out, the stakes would be limited, and would not adversely affect huge populations. Cultural diversity,

---

[29] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985, p. 97.

each dependent upon their bioregion and interdependent with other bioregions would tend toward cooperation in the same way that the complex and diverse elements in ecosystems cooperate.

> Sharing the same bioregion, they naturally share the same configurations of life, the same social and economic constraints, roughly the same environmental problems and opportunities, and so there is every reason to expect contact and cooperation among them. Even, for some specific tasks, maybe even confederation among them--but of a kind that need not mean diminished power or sovereignty for the community, but rather enlarged horizons of knowledge, of culture, of services, of security.[30]

Just where the cooperation tails off, or becomes superfluous to the functioning of either bioregion is unclear. Within the same bioregion there could be mutual benefit for neighboring tribes to cooperate without disregarding ecological constraints, but as the distances between bioregions grows, the coherence and commonalities of their particular physical environments would differ. The sort of issues that any community of communities (that is, a bioregion) deals with, including water and waste management, transportation, and food production, would also be somewhat different. Thus, interdependence and cooperation is important between communities physically close to each other.

---

[30] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985. p. 95.

However, interactions between bioregions and even larger geographic regions must be able to pass certain ecological and sociological tests: the transfer of goods and services must not entail a waste of energy and the benefits must accrue equally to all bioregional communities involved. In addition, the goods and services exchanged must not be able to be produced locally as well as meet basic human needs. The two areas of trade between bioregions that come to mind that meet these criteria are communication and information networks.

The ecological constraints that determine the limits of trade between regions also define the extent of self-reliance of communities. Shann Turnbull offers the following distinction between self-reliance and self-sufficiency:

> Self-reliance: the ability of a community to produce its basic food, clothing, shelter, and energy and earn sufficient external income to pay for external goods and services to maintain an acceptable standard and style of living.
>
> Self-sufficiency: the ability of a community to exist at an acceptable standard of living without any external exchange of goods and services.[31]

Turnbull's definitions are focussing on two points: one, determination of an "acceptable standard of

---

[31] Bennello, C. G., Swann R., Turnbull, S. Building Sustainable Communities. New York, New York: The Bootstrap Press, 1989, p. 132.

living," and two, the willingness to participate with out-of-community income or goods and services. Whether a community is self-reliant or self-sufficient will depend on many factors, including the natural and human resources available within the community, the values of the members of the community, and the degree to which the community has been able to wrestle back economic and political self-determination from state and national levels. Daly also offers his view on the degree of self-reliance achievable. He notes:

> Since economic self-sufficiency is not an absolute, it is possible to think of rather small communities having considerable economic self-determination without supposing that they could supply all their needs. In this country at the level of the states a large degree of self-determination would be possible with a decentralized economy.[32]

I agree with most of what Daly says, but I believe that he did not fully consider the part about self-determination at the state level. To begin with, the bioregional model does not recognize the "state" as a viable unit upon which to base self-reliance or self-determination. The reason is that the state is defined by politics, not ecology. Since the human animal is dependent upon the richness of ecosystems, most all the resources should be available locally to sustain our "acceptable standard of living." Even at a meager

---

[32] Daly, H.E., Cobb, J.B.Jr. For the Common Good. Boston, Mass.: Beacon Press, 1990, p.174.

standard of living, the citizens of a politically-defined state will not be assured of the necessary natural resources for self-reliance or self-sufficiency.

I would, therefore, rather embrace the bioregional reasoning that 1) bioregions do exist and are definable with real though flexible boundaries; 2) standards of living are relative to the resources available within the bioregion; and 3) local economies would be more stable than economies based upon trade. Sale sums up the value of self-sufficiency:

> There is not a single bioregion in this country even at the georegional level,[33] that would not, if it looked to all its natural endowments, be able to provide its residents with sufficient food, energy, shelter, and clothing, their own health care and education and arts, their own manufactures and crafts.[34]

Every bioregion will have some elements in scarcity relative to the global supplies now available. For example, some bioregions may not have a source of metal. Modern society could not persist without the various metals--for conductance of electricity, framing for skyscrapers, metal tools, gold fillings, and a

---

[33] The georegional level is defined by Sale as the smallest division within the bioregional model based upon a distinct physiographic feature such as a watershed, mountain range, or valley.

[34] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985, p. 75.

million other uses. Doing without this precious commodity boggles the mind, and may even send the budding bioregionalist back into mainstream thought. On one hand, we can look backward to what life would be like without the inventions of technology; on the other hand, we can look to creativity springing forth from necessity. Trying to substitute local materials for distant ones is one bioregional imperative; knowing when and how much to trade with other regions another. It is only through self-reliance born out of the spirit of decentralism that communities and bioregions can gain the economic and political autonomy that best heed the requirements of both natural and human ecosystems.

4. Complementarity. The decentralist nature of organisms that I have posited must be balanced by another natural law that is allowing these centrifugally-driven individuals or populations of individuals to function together to form distinct, definable ecosystems. The organismic ecologists hold that communities are "integrated units with discrete boundaries."[35] The individualists hold that communities are not integrated units but collections of populations that require the same environmental

---

[35] Krebs, Charles J. Ecology: The Experimental Analysis of Distribution and Abundance. New York, New York: Harper & Row, 1985, p. 458.

conditions.[36] This individualistic school of thought seems analogous to non-discrete bioregional boundaries that define distinctions between regions.

I am concerned here with the interactions between species occupying niches throughout the ecosystem. Ecologists define "hetarchy" as distinction without rank,[37] as opposed to hierarchy's division of power and importance. For example, in a hive, we find complementary roles among foragers, fighters, egg-layers, builders--without the sense of dominance or primacy with any one occupation. Any stratification in animal populations does not conform to our definition of organized and institutionalized fixed orders or ranks.

Tribal societies also displayed this "distinction without rank" characteristic. There was rarely any stratification found in these societies.[38] Customs and taboos thwarted the formation of anyone coming to power over others, though divisions of labor according to the sex, strength, spiritual tendencies, or skill did exist. These roles complemented each other and harmonized the community. The needs of the community

---

[36] Ibid.

[37] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985, p. 98.

[38] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985, p. 99.

could be met with local talent and little hierarchy from the outside. All citizens, no matter their position, were afforded equal status among their colleagues, though individuals would be free to reach for their own level of success:

> The man adept at hunting seals, the woman favored as the singer of lullabies, the elder given the knowledge of magic, the grandmother wise in the healing power of herbs, the youth capable of leadership in battle--these are all important people and highly regarded, but they do not generally accumulate power to themselves as a result of their prowess, are not given positions on a ladder of command and dominance.[39]

The bioregional polity has no place for hierarchy and political domination. Communities would have the ultimate control in apportioning, in some balanced fashion, the tasks needed for self-reliance. All the members in the community would be treated as valuable citizens having their special and individual abilities. Scaling down the size of the work parties allows for avoidance of bureaucratic inefficiency while embracing the dictates of ecology. Citizens would perform necessary functions without leaders, ruling committees, or bureaucratic intervention.

This type of grassroots organizing would require all citizens' full interest and involvement. This may seem like an unlikely achievement given the non-

---

[39] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985, p. 100.

participatory state of affairs now prevalent in today's societies, but that doesn't mean communities can not change. Communities must become more participatory through complementarity if the community is to rely upon itself for its basic human needs. When communities are dependent on outside forces for their basic needs, they fall prey to the goals of governmental and corporate entities that have little accountability at the local level.

Perhaps the use of the word "community" needs more clarification. Daly describes his definition of community with the following four criteria:

1. Membership in the community contributes to self-identity.
2. There is extensive participation by its members in the decisions by which its life is governed.
3. The society as a whole takes responsibility for the members, and
4. This responsibility include respect for the diverse individuality of these members.[40]

Daly goes on to say that a community can embrace relative degrees of the above criteria, and still be called a community. I maintain that Daly is ignoring the reality of the millions of disenfranchised people in this country alone. Furthermore, I assert that a community at the national scale is impossible and oxy-

---

[40] Daly, H.E., Cobb J.B. Jr. For the Common Good. Boston, Mass.: Beacon Press, 1990, p.172.

moronic. Energy spent on trying to make a nation feel a sense of community could be better spent on assuring that bioregional groups have the tools to live self-reliantly.

In strict biological terms, a community is "any assemblage of populations of living organisms in a prescribed area or habitat." Colloquially, thoughk we use the word "community" when we speak about a town, city, or any construct of haumn engineering. We can even speak of the college community. we are thin king only of the human population and their buildings, roads, and acitivities; nto the assemblage of many kinds of organisms living together in a prescribed area. I surmise that we are able to make this translation in heman terms only because peoplee act so individually (at least in our western culture), and so can erplace the diversity of other species with the pluralism of modern societyies. we then begin to lok like an agglomeration of speartate living organisms, each one prusuiing its special interests in the community.

I prefer to accept Sale's definition of community as a:

> ...the more-or-less intimate grouping either at the close-knit village scale of 1,000 people or so, or probably more often at the extended community scale of 5,000 to 10,000 so often found as the fundamental political unit whether formal

or informal.[41]

I argue that Daly's criteria for a community can only be met at the level described by Sale, and not the national or global level. A community requires personal and interpersonal relationships which physically can not be met over large distances. There is a certain scale that limits our ability to relate to another individual.

Bill Mollison thinks that the responsibility to change lies with individuals:

> ...changes in people come about by education and information, and when enough people change, then political systems (if they are to survive) may follow, or become as irrelevant as they now appear to be in terms of real solutions...for this reason, the place to start change is first with the individual (oneself), and second in one's region or neighborhood.[42]

In the meantime, assuming a community is striving for the small and politically-efficient scale, its members will make it their business to care about the entrenched political institutions that thwart fundamental change. For example, if specialists outside the community are needed, then participation of the community members will know what specialists to

---

[41] Ibid., p. 94

[42] Mollison, Bill. Permaculture: A Practical Guide for a Sustainable Future. Washington, D.C.: Island Press, 1990, p.509.

trust.

Political responsibility in this country has always rested with the aristocracy, right from the beginning with the founding fathers. These leaders thought they knew best for the country, and clearly thought it prudent and essential to keep the power of political decision-making in their domain. Today, local regions are dominated and drained of effective power of self-governance by the efficiency of centralization and bureaucratic control. This efficiency that is supposed to represent the people of the United States instead alienates its citizens, evidenced the lack of voter turnout in local and national elections. It seems ludicrous for a country as large as ours to rely on so few to represent us. Jim Dodge explains the ineffectual scale of the United States government:

> The United States is simply too large and complex to be responsibly governed by a decision-making body of perhaps 1000 people representing 220,000,000 Americans (1981 figures) and a large chunk of the biosphere, especially when those 1000 decision makers can only survive by compromise and generally are forced to front for heavy economic interests (media campaigns for national office are expensive). A government where one person represents the interests of 220,000 others is absurd, considering that not all the people voted for the winning representative (or even voted) and especially considering that most of those 220,000 people are capable of representing themselves. I think people do much better, express their deeper qualities, when their actions matter. Obviously one way to make government more meaningful and

> responsible is to involve people directly day by day, in the processes of decision, which only seems possible if we reduce the scale of government. A bioregion seems about the right size: say close to a small state, or along the line of the Swiss canton system or American Indian tribes.[43]

5. Diversity. An ecosystem usually tends toward diversity. As the system grows more diverse, the myriad connections supporting the life forms becomes more complex. For example, if one species is removed from a tropical rainforest--say a species that inhabits one very small area--not much of the overall health of the ecosystem may suffer. On the other hand, remove one species from a delicate and dry sonoran desert, and the effect will likely be more dramatic. Sale tells the story of the eminent British biologist J.B S. Haldane being asked by a group of distinguished theologians what he thought best characterized the supreme being. Haldane answered "An inordinate fondness for beetles."

What he was hinting at was the fact that of the million or so animal species identified so far, almost half of them--400,000--are beetles. This fact of nature alludes to its propensity for diversity. Is it really necessary to have that many varieties of

---

[43] Dodge, Jim. "Living by Life: Some Bioregional Theory and Practice." The CoEvolution Quarterly, Winter 1991, pp. 8-9.

beetles? The point is that the natural life-building processes tend toward whirling species out into the world to make a home for themselves in their niche, which means evolving to meet the specific requirements of varying habitats.

This should be true for the human animal, and in fact, it has been true through most of the evolution of our species. Our species is unique on this earth. Though we have lost some of the brute strength of other animals, we have made up for it in other ways such as learning to:

> ...climb trees and swim rivers, to run across prairies and swing on vines, to hunt and forage and to plant and nurture , to work alone life a hawk and in bands like wolves, to communicate intimately like honeybees and signal over great distances like porpoises, to know the world by smell and by three-dimensional sight, an acute sense of hearing, and a delicate sense of touch."[44]

The way that humans have organized society into hunting bands, and later, tribes, clans, and villages has increased human cultural diversity. Even to this day, in a 20th century sort of way, the communities that build diversity into their structure--in economic and cultural terms--will survive and grow. The problem with the type of growth that passes for stability is that it is short-lived because it is not based upon

---

[44] Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985, p.105.

ecological principals that provide the staying power of human activities. And though it seems like there is amazing diversity in the city, a more comprehensive view shows that the trend is building toward uniform and monolithic cultural, economic, and political spheres. For example, in a supermarket, you will likely find 40 kinds of boxed breakfast cereals, 30 kinds of packaged cookies, 20 kinds of toilet paper, 10 kinds of tortilla chips, and 5 kinds of dental floss. Now, do we really need all these choices? Do we need any of these products? And to top this off, there is another supermarket across the street with the exact same products. Though the diversity seems tremendous here, in reality there is a paucity of diversity, since all the products are but convolutions of the same thing, with the same ingredients, for the same purposes--competition and profit. Modern industrial culture seeks uniformity, interchangeablity and conformity in the name of efficiency so that those who control the most resources, labor, and capital will be able to slightly alter this month's cereal box for a new and improved model next month.

In the end, the Pepsi-fication of the world would like to manufacture:

> whole nations given over to a single product, cities to a single industry, farms to a single crop, factories to a single article, people to a

single job, jobs to a single motion.[45]

By contrast, the bioregional polity would r
the opposite direction, motivated by true divers
that matched the endless permutations possible w
the human imagination. Particularly, the divers
bioregional politics would mirror the challenges
presented by the natural lay of the land, its mo
slopes, its riverine enclaves, its quiet embayme
The people inhabiting these different regions wi
the same bioregion would be part of a coherent w
would require cooperation between the flatlander
the hill folk, the urban and the rural, the upst
rancher and the downstream farmer.

Similarly, political diversity would reflec
bioregional differences. In accepting diversity
regions, we must accept, even welcome, the diver
ways of self-governance. It is possible that
conflicting political systems would develop within
bioregional constraints, but given the politics that
come from a respect and sense of belonging to a pl
from aiming to live with the mysteries of the la
affections of the citizens in one bioregion woul
toward building partnerships with neighboring
bioregions despite practical differences.

---

[45] Ibid., p. 106.

Chapter Six

The Bioregional Community

1. Introduction. Land is a commodity in western economic models. Under the model, land ownnership is viewed as an inalienable right. This concept was foreign to tribal or clan law.[46] Land was viewed by tribes and clans as a product of a creator, and therefore, something that could not be owned. As the church or king-emperor gained dominance over tribal societies, the tribal citizens lost control of land to the church or king who dubbed themselves as representatives of the creator, and therefore owners of the land. Subsequently, land became a title that could be sold to individuals, states and companies. The value of land ownership became intricately connected to the accumulation of power. Those who could control the land and its life forces could also control masses of people. This drive for the amassing of land areas has continued into modern times; it is driven by greed beyond basic, reasonable human needs. Now that western society so firmly embraces

[46] Mollison, Bill. Permaculture: A Practical Guide for a Sustainable Future. Washington, D.C.: Island Press, 1990, p.545.

private ownership of land as an inalienable right, what can be done to make a transition to another paradigm?

In this chapter I present the Community Land Trust (CLT) as a transition to the vision of land stewardship[47] inherent in the bioregional community. I also discuss how it benefits the greatest number of members in a human community while providing for diverse and sustainable use of the land.

The bioregional paradigm seeks to re-institute tribal wisdom of connectedness to the land. This paradigm means transitioning out of present destructive habits, such as moving productive land into large-scale commercial development projects that both benefit too few people and impoverish the landscape. A more beneficial use of land would be to provide access for stewards who would produce their own shelter and food, while preserving sensitive habitats as functioning ecosystems. In becoming trustees (not owners) of land put in community trust, the trustees could better heed the tenets of ecosystem theory: that natural communities of organisms tend toward complexity, diversity, and interconnectedness. The CLT is one method in the

---

[47] Land stewardship is defined as re-establishing the human relationship to the environment in a responsible manner, using inherited natural resources productively, yet preserving their innate attributes forever. Stewardship is both an individual and community commitment.

bioregional community that provides the framework for re-inhabiting the land in alignment with ecological sensibilities.

I will flesh out this skeletal view of a CLT by discussing its following characteristics: the high and sustainable productivity associated with local control of resources; the benefits to the local community; and the "decommoditizing" ability of the CLT. I will explain some of these topics by offering a hypothetical scenario of a small town placing its city property into a CLT, and show how this would benefit all members of the local biotic community. The other topics will be discussed as well.

2. The Community Land Trust (CLT). A CLT is a democratically-structured nonprofit corporation with an open membership which attempts to guarantee the legitimate aspirations of private ownership while considering the needs of the local community. As I have defined in previous chapters, the local culture that practices self-reliance will necessarily be acting in accordance with ecological principles. They will be preservationist, conservationist, and restorationists all rolled into one. A CLT provides the opportunity for people at a local and grassroots level to learn the skills and knowledge necessary for operating a

sustainable bioregional community.

The CLT takes a bioregional step toward recognizing that land should not be viewed as a commodity. Mollison explains the reason:

> Our own lifetimes are, in terms of soils, trees, or climate, as ephemeral as snow flakes. For a little while, we have the use of the earth, and our time here is bounded by birth and death. Thus the very concept of land ownership is ludicrous, and we need only to use what is needed for the brief time that we are here; even birth and death are small events in a total life pool continuum.[48]

Mollison's statement implies that our lives as humans are not above the laws of nature. We are part of the dance of ecosystems, one species that still needs to discover its useful place. I maintain that the role of the civilized person in today's world is to play a part in the great ecosystem recovery that needs to take place everywhere on this planet. This work does not need to be done always through environmental and social change organizations, but through personal effort as well--through community transformation, and through attention to living with the wealth of one's bioregion.

Through the CLT, the individual right to exploit natural resources is replaced by a commitment to rebuild our community's natural heritage into gardens that mimic ecosystem complexity and richness. This commitment does require remaking some part of our consciousness that

---

[48] Ibid.

demands a ownership of and domination over, the earth.

Though the CLT requires some shifts in landowner consciousness (to promote land reform), the changes are not so revolutionary nor so far from western ideological tenets as to prove impossible. Indeed, the community land trust has already met with some success in the United States. With encouragement, this new form of community trust would benefit the land and help bring about the much needed radical and complete transformation in our ways of viewing land. Some of the values crucial to the success of the community land trust, already firmly held by members of society, include:

1) the importance of private initiative (equity in the community land trust accrues to the individual for improvements on the land)

2) the concept of stewardship of land is already held by other organizations in society, including the environmental movement and farmers

3) the encouragement of self-reliance and local control of natural resources, feelings now strong in many rural communities, and

4) the recognition that communities should have control over their own lives.

In earlier chapters, I spoke of bioregionalism as blending ancient truths with modern insights. These four statements recognize older values that regard land not as a commodity to be bought and sold, but to be revered, cared for, and even worshipped. They also point the way

toward building coalition between bioregional proponents and established environmental and social change organizations.

3. Land Use and Ownership. The departure that land trusts make in regard to ownership of land are based upon traditional philosophies of the commonality of land, while use of the land is a concept that dovetails well into the western liberal democratic mind which believes in personal initiative. The CLT allows for individual use of land, transferable through inheritance.

The economic implications of individual use coupled with common ownership are important since it enables the community to capture the "unearned" (described below) income of land values for the public good, while individuals benefit from their personal improvements on the land. For example, as noted previously, increase in land value occurs as a community builds more infrastructure to serve the land in question. The person or corporation holding title to the land benefits directly from the community's effort by an increase in the value of the land. This owner can then resell the land at a profit, having "captured" this increase in land value without personally having "earned" the increased value. Thus, this land is said to be held "speculatively." Developers will have no interest in

land in trust since increases in land value accrue to the community at large, and not to individuals for profit. However, the individual does benefit from his/her own efforts and improvements on the land, what is termed "use" value. If that individual (who has been leasing the trust land) makes improvements on the land such as buildings or improved soil fertility, then he/she is compensated in the event he/she moves from the site. In summary, use value accrues to the individual while actual land value accrues to the community.

The CLT also has the ability to compete favorably on the normal real estate market by purchasing land directly. The mortgage is then paid by the residents who lease the land from the land trust organization. The only people who lose out in the deal are the individuals and corporations who would seek to accumulate land not for the purposes of stewardship, but maximization of profits, like any commodity. Additionally, the land trust has the ability to accept land as a gift or bequest.

4. Operating the Land Trust. The CLT is an appropriate vehicle for combining the ideas of conservation and development that fit into the bioregional model. Sustainable development means increasing the yield of degraded systems to mimic yields found in natural

systems. Stewards in the rural land trust have the opportunity to use the land for productive purposes while enhancing the capacities of the land. One way to accomplish this is to design site-specific plans for perennial gardens that mimic the structure and functions of the natural local ecosystems. For example, in the Pacific Northwest bioregion, a multi-canopy, multi-crop food system could mimic the old-growth forest system. In the desert bioregion of Eastern Washington, plants that tolerate and mimic the arid steppe plant guilds would be more appropriate and sustainable with regard to aquifer recharge, and any other constraints of that bioregion.

Thus, while land held by a community trust is being restored and revived, the residents are able to build economic security by integrating human needs into the landscape. Each lessee that upholds the ecological covenants written by the CLT will accrue "use" value, while providing a future economic base for community stability.

6. Food, Self-reliance, and The CLT. The leasing arrangement of the CLT produces an income that is responsive to the market if a farm in the local area should come up for sale. Once the farm is purchased, and appropriate land use covenants are drawn up, farmland can remain farmland, and not be either in the grips of

developers or laying idle as a backdrop to a wealthy development (through development rights transfer). A farmer could then afford to farm without the expenditure of land purchase, but with the comforting thought that any effort expended in improving the soil or farm infrastructure would be saleable upon retirement from farming. When the farmer is ready to sell development improvements, the land trust covenants allow for a smooth transfer to another farmer who purchases the improvements and takes over the lease.

This small scale operation fits into the bioregional vision of local community production of local needs. The CLT that has a land base is able to set up food production systems that both mimic natural ecosystems in conservation of energy. For instance, a forest is a set of interconnected processes that tends to self-regulate as it builds for the greatest yield. The forest does not need to import materials beyond what natural cycles bring into its grasp; these include water and nutrients from the sky and rivers, plant and animal migrants, and solar energy. Given these constraints, ecosystems evolve a structure and function that displays a richness of production. By designing our food production systems for self-reliance, we will be mimicing the only sustainable model we have--natural ecosystems.

3. Community Land Trust Scenario. Suppose a rural town in the northwest wishes to revitalize its economic and cultural heritage. The townspeople realize that a dependency upon outside supplies for food and materials (lumber for building housing, etc.) makes their community vulnerable to distant and uncontrollable forces: increases in the price of imported food and gasoline, dependency on non-local credit infrastructure, trucking strikes, etc. It therefore behooves a town to become as self-reliant as possible in a way that benefits its citizens and the local ecology. The townspeople wish to reinhabit the land by harmonizing with the capacities of the land to support human and non-human life. They place the entirety (both public and private) of their town property into a CLT. About 70-80% of the area would be reserved for forestlands with 20-30% remaining for farmlands, open space, industry, schools, etc. They do this in order to steward their local resources in a self-reliant fashion.

This community land trust scenario, having set aside large tracts of land for the benefit of the community, will allow sustainable use of the land. Prior to the community land trust, ownership was in small parcels, each not suitable for long-term management strategies and sustained-yield practices--even if the owners were interested in this type of management. Most property was

held for the speculative increase in the value of the land as improved infrastructure (roads, power, sewers, etc.) increased the value of the land without the owner doing any work to earn the increased value. However, this hypothetical community knows that the community itself provides the services and improvements that increase the surrounding land value. Therefore, the community members decide that all citizens should benefit from increased land values.

Many problems will be alleviated from the wise use of land by the community, including saving farmland and openspace, designing restoration of wild corridors, protecting groundwater recharge areas, setting aside public access and recreation areas, and the beginning of sustainable community design. All these problems can be addressed by the community members as they exercise their democratic control of their own resources for community benefit. Foreign development for the primary benefit of outside corporate interest will not be allowed in this community land trust town. With all land now in this hypothetical community trust, speculative schemes will no longer line the pockets of a few landowners. Local people become both the stewards and beneficiaries of the activities on the land.

The loss of prime farmland is a good example of encroachment of development dollars. Land that used to

be available for farming is now becoming high priced, and the only people who can afford the land are developers or people with enough money to have a place in the county without stewarding the full benefits of the land. Covering up the biological wealth and natural diversity is not the bioregional way to learn about the capacities and attributes of a bioregion.

The town's land can now appropriately be managed by ecologists who understand the commitment of the citizens to maintenance of their bioregional richness. Wise land use plans can be designed with the intent of increasing the biotic wealth, while learning the limits of human activity on the land. With the economic incentive of gain from land prices eliminated, ecological truths can be upheld by prudent use of the land. For instance, forest ecologists can determine how much growth a forest produces each year. This will guide the harvesting of trees and other materials from the forest: we must not remove more than the annual growth of the natural system. To remove more than this level is to degrade and simplify the forest, which eventually impoverishes the dwellers in the land. Ecologists recommend that about 5% below the annual growth rate be left to rot on the forest floor,[49] thereby regenerating the soil that is the base of a

[49] Quote from Jeff DeBonis at a talk he gave with Gary Synder and Richard Nelson at The University of Washington in March, 1992.

healthy plant community.

As the forest is growing in health and productivity, so too will the townspeople grow. Employment will rise in this intensively-managed collection of ecosystems. One person for every 300-400 acres will be needed to work in the woods cleaning and thinning out trees so the forest will benefit from the extra sunlight. This scenario of a managed forest system (and the agricultural land for that matter), must be seen as a comprehensive plan for the needs of the people and the other life forms that inhabit the area. If there seems at this point to be too much meddling and management by the human component, it is by design--a design that purposely directs us to encourage the greatest yield from the system by consciously becoming part of a local living landscape.[50] Of course, this yield grows with time as we work with natural processes that become more complex and intricately compounded with interlocking webs and associations of species.

Weed trees that were thinned or cleared can be reused for local benefit, creating more work (cooperatively managed, of course) and self-reliance of

---

[50] Mollison, in his book Permaculture: A Practical Strategy for a Sustainable Future, defines system yield as "the sum total of surplus energy produced by, stored, conserved, reused, or converted by the design. Energy is in surplus once the system itself has available all its needs for growth, reproduction, and maintenance."

basic human needs. Energy could be produced (firewood, wood chips), along with paper (pulpwood), biomass for cattle food, and versatile plants like hemp (for animal food, fiber, medicinals, land restoration, and paper). Additionally, the local industries utilizing these raw materials would set the stage for more worker cooperatives, locally owned and operated.

Wise management of the community forest lands will create a sustained-yield harvest system that will result in higher quality lumber and thus longer-lived and higher quality wood products. The exponential rate of involvement for the community residents would continue to rise as multiple functions and uses are devised for the forest products. Saw mills would be needed for supplying the wood industries that would spring up to process the products of the forest locally, including cabinet and furniture making shops, futon production facilities, plywood mills, and boat shops.[51] Lest it sound like the region is turning into a mass of wood processing industries, keep in mind that foundational ethics and comprehensive plans will have been prepared for a sustainable use of the town's natural resources. This

[51] We should keep in mind that each bioregion will have different natural endowments with which to build a local economic base. Thus, wood industries would be found in forested areas, while other plant and adobe materials will serve the needs of people in, say, the a desert bioregion. Tribal societies have creatively used local resources; we can relearn to do likewise.

mandated foundation calls foremost for the enhancement of the land's diversity, not its degradation. From this foundation, we proceed with small and local industries that encourage opportunity for full meaningful work, while distributing equal benefits to all residents, with little, if any, of the benefits exported for capital accumulation.

Besides the forest land (which is the zone of least influence in the human co-opted town area), land suitable for farming and orchards will be freed from the speculative market, thus allowing local fertile land to produce most of the town's food needs. This will create additional work. Knowing the sources of the food, and how it was grown, will encourage interest in gardening that will spread to community gardens where neighborhoods will band together to produce a good deal of their own food.

Taxes assessed through the trust will translate into sustainable development as better services, roads, and schools unlike the non-community land trust village, where only the homeowner-taxpayer is burdened with development costs. Improved services in turn increase employment and result in a healthier living standard for all community members.

With the town in land trust, appropriate and rigorous land uses could be adhered to--which means that

housing is not built on prime forest and farm land, and sensitive areas are reserved for wildlife. There would be no land held for the speculative market, hence no individuals hoarding unearned income from increases in land value. Also, housing would be lower since the lessee (99 year renewable lease) would not have to factor in the price of the land. Local residents would have first option at the purchase. Environmentally-nurturing covenants would be part of the lease contract for the use of the trust land, and anyone not adhering to the covenant, that is, causing a degradation of the land, would lose their lease.

Coupling the science of ecology with alternative economic and land policies, it is entirely possible that such a scenario would happen if the human race could realize the urgency of the situation. The trick is to make a gentle transition in the way we view our connection to the life forces that support us. One surefire way to educate ourselves and participate in this experiment is for communities to strive for self-reliance for the bulk of their needs. Residents will benefit by increased cooperative work, more community spirit, young people staying in their home town, and a revitalized community that bases its human economy on enhancing the landscape according to ecological principles.

The two steps that have occurred in this

hypothetical scenario are 1) the "decommoditization" of land by its removal from the speculative market and 2) the "decapitalization" of land.[52] Capital markets (including banks) will no longer be needed to buy local land, freeing up the capital for other kinds of investments such as mortgages on new housing, and new industries appropriate for bioregionally-oriented communities, such as passive solar energy, waste recycling and recovery (composting: human, plant, and animal), biogas generation, and so on.

Further uses of the capital could go toward the often neglected, though crucial, spiritual needs of a community introducing new modes of education, forging new ways of revering all forms of life in the community, and bringing more ecological awareness into traditional religions.

As inflation, unemployment, and environmental degradation grow in and around communities, these visionary reforms of land ownership and control may become more attractive for a majority of the community members. It is only fair that everyone who participates in planting and nurturing the seeds of self-reliance within a community's boundaries should harvest the bounty that life has to offer--bounty in terms of access to

---

[52] Bennello C. G, et al. Building Sustainable Communities. New York, New York: Bootstrap Press, p. 24.

healthy land for spiritual renewal, meaningful and secure work, and applications of local ownership and control.

The vision inherent in the bioregional community agrees with the three laws of a bioregional polity outlined in the previous chapter: the laws of decentralism, complementarity, and diversity. This hypothetical example of the implementation of a bioregional community on a large scale allows communities to decentralize from preponderant levels of foreign control. It also demonstrates how decentralized communities can begin to rebuild human cultural and ecological diversity.

The land trust is a new approach to land tenure that advocates just redistribution of private land for public conservation and stewardship uses. We must also go beyond conservation to restoration, which helps complex natural ecosystems evolve toward complexity and diversity. Land, in this new, though age-old, vision, is held in trust for the community's good. The bioregional community will allow a commonwealth of activities that uphold bioregional sensibilities of living with the local landscape in ways that enhance rather than continually degrade natural and human systems.

Chapter Seven

Conclusion

Is it natural to think that the natural endowments of a land should be the building blocks for creating human communities within that bioregion? To answer yes to this question means that many densely populated regions of the earth are not in accord with local constraints. Today, we do not want to feel constrained by nature, but only by our own ability to invent ways to supersede natural laws. But it is impossible to overcome some laws, such as the finite resources that are available for economic growth. The idea of growth in economic terms is not instructed by ecological considerations, especially the idea of limitless growth. Our economy depends on continued growth, but how long can an economy grow using the earth's resources?

The terms sustainable growth and sustainable development currently are synonymous. Herman Daly, senior economist for the Environment Department at the World Bank, says:

> ...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"--that is, 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."[53]

The bioregional economy fits with Daly's idea of steady state economics. And what more appropriate place to practice "development without growth" than at the bioregional level, where nature as teacher is close to home, and where our interdependence with ecosystem processes is keenly felt?

If we want to begin working toward a sustainable culture, we need to change our perceptions of the natural world. We need to think not so much of "going back to the land," rather how to develop an intimate, conscious relationship with our place; call that place our home for the long run; and include a rich and ceremonial life in our interactions with nature. If we work on these tasks, then we will be on our way toward living "according to the same deep, ancient, and perennial sources of knowledge as native and indigenous peoples always have, but in the present, under the present conditions, no

---

[53] Daly, Herman. "Sustainable Growth: A Bad Oxymoron," Grassroots Development, Vol. 15, No. 3, 1991, p. 39.

matter where we live, even in the largest cities."[54]

The changes that need to come about for the restoration of natural ecosystems and the ecologically-wise use of the landscape are possible. Bioregionalism does not suggest revolution, nor administrative or legislative acts. Rather, fundamental change will come gradually and inevitable for a society that seeks a balance with nature and within itself. Sale notes:

> It is only by the long and steady tenor of evolution that people will ease themselves into such a society as the alternative futures gradually come to seem senseless and the bioregional prospect becomes the only sane choice.[55]

Sale seems confident that the human race will discover its erring ways in dealing with nature, and be eager to use practices that blend what our ancestors knew with corroborations through ecological studies. The rational and the ritual must come together to understand the complexity of the human experience on this earth. The bioregional truths help us in reordering:

> ...all our existing establishments: political-legal, commercial-industrial, communications, educational, and religious. At present all of these establishments are involved in the devastating impact of industrial society on the natural world. The human arrogance they manifest toward the other natural members of the life communities remains only slightly affected by the foreboding concern of the

---

[54] Haenke, David. Bioregionalism: Beyond Environmentalism. Personal Paper, January, 1991.

[55] Sale, Kirkpatrick. "Bioregionalism: A New Way to Treat the Land." The Ecologist, Vol. 14, No. 4, 1984, p. 172.

> future expressed by professional biologists and by others who have recognized that the imminent peril to the planet is not exactly the nuclear bomb, but the plundering processes that are extinguishing those very life systems on which we depend.[56]

Berry expresses the concern that our industrial society tends to abide blindly by the tenets of an mechanized world view, which eradicates ecosystems to sustain itself, or, at best, mitigates its own destruction.

Bioregionalism lays down the foundation for a re-sacralization of nature. It is a movement of people working to build a parallel society which ignores central governmental laws that are not relevant for people involved in creating equitable cultures based on local self-reliance. The ethics of bioregionalism go beyond the surface structures that I have discussed in this essay, for even if we do achieve bioregional self-management across the face of the earth, we are still in danger of producing endless goods for endless consumptive cultures. We must go beyond the economic realm for answers on how to live in harmony with all other forms of life. As Mollison says, "We should always tend towards minimizing the spread of people and their works on the face of the land...for it is the ultimate grace to give room on earth to all living things, and the ultimate in

---

[56] Berry, Thomas. The Dream of the Earth. San Francisco, California: Sierra Club Books, 1988, p. 170.

modesty to regard ourselves as stewards, not gods."[57]

[57] Mollison, Bill. Permaculture: A Practical Guide for a Sustainable Future. Washington, D.C.: Island Press, 1990, p.558.

Bibliography

Andruss, V., Plant, C., Plant, J., Wright, E. Home!: A Bioregional Reader. Philadelphia, Pennsylvania: New Society Publishers, 1990.

Bailey, R.G. et. al. "Ecological Regionalization in Canada and the United States," Geoforum, Vol. 16, No. 3, pp. 265-275, 1985.

Benello, C. G., Swann, R., and Turnbull, S. Building Sustainable Communities. New York: Bootstrap Press, 1989.

Berg, Peter. "Watershed-scaled governments and green cities," Land Use Policy. January 1987

Berg, Peter. "What is Bioregionalism?" Trumpeter, Vol. 8, No. 1. Winter 1991.

Berry, Wendell. Home Economics: Fourteen Essays. San Francisco, California: North Point Press, 1987.

Berry, Thomas. Dream of the Earth. San Francisco, California: Sierra Club Books, 1988.

Berry, Wendell. What Are People For?. San Francisco, California: North Point Press, 1990.

Bioregional Congress of Pacific Cascadia. The Second Bioregional congress of Pacific Cascadia--April 7-10, 1988.

Daly, H. and Cobbs. For the Common Good. Boston, Massachusetts: Beacon Press, 1989.

Daly, Herman. "Sustainable Growth: A Bad Oxymoron" Grassroots Development, Vol. 15, No. 3, 1991.

Dodge, Jim. "Living by Life: Some Bioregional Theory and Practice." The CoEvolution Quarterly, Winter 1981.

Duncan, David James. The River Why. San Francisco, California: Sierra Club, 1983.

Elton, C. The Ecology of Invasions by Animals and Plants. Methuen, London, 1958.

Isaacs, Harold R. Idols of the Tribe. Harper & Row, 1975.22

Ish River Bioregional Confluence. "The Ish River Country"

Jay, Tom. "Prologue to Ohode RARE II Proposal," reprinted in Dalmo'ma, ed. Michael Daley, Port Townsend, WA. 1978.

Krebs, Charles, J. Ecology: The Experimental Analysis of Distribution and Abundance. New York, New York: Harper & Row, 1985.

Little, Elbert L. The Audubon Society Field Guide to North American Trees. New York, New York: Alfred A. Knopf, 1980, pp.286-7.

Matthei, Chuck. "Community Land Trusts as a Resource for Community Economic Development," reprinted from Financing Community Economic Development. Editor: Richard Schram, 1981.

Matthei, Chuck. "Building New Relationships Between Conservancy: Trusts and Community Land Trusts," National Consultation, Oct. 1981.

McCloskey, David. 1989. "On Ecoregional Boundaries." Trumpeter Vol. 6, No. 4.

Mollison, Bill. Permaculture: A Practical Guide for a Sustainable Future. Washington, D.C.: Island Press, 1990.

North American Bioregional Congress. North American Bioregional Congress II Proceedings, August 25-29, 1986. .

North American Bioregional Congress, Proceedings. "The Third North American Bioregional Congress Proceedings." August 21-26, 1988.

Ozark Regional Land Trust. Pamphlet on operation of Ozark Regional Land Trust, 427 South Main. Carthage, MO.

Plant, C., and Plant J. Green Business: Hope or Hoax?. Philadelphia, Pennsylvania: New Society Publishers, 1991.

Plant, C., and Plant J. Turtle Talk: Voices for a Sustainable Future. Philadelphia, Pennslyvania: New

Society Publishers, 1990.

Sale, Kirkpatrick. Dwellers in the Land. San Francisco, California: Sierra Club Books, 1985.

Sale, Kirkpatrick. Human Scale. New York: Coward, McCann & Geoghegan, 1980.

Sargent, F. O., Lusk, P., Rivera, J. A., Varela, M. Rural Environmental Planning for Sustainable Communities. Washington, D.C.: Island Press, 1991.

Todd, N. J., Todd, J. Bioshelters, Ocean Arks, City Farming. San Francisco, California: Sierra Club Books, 1984.

United States Environmental Protection Agency. "Ecoregions of the Pacific Northwest." EPA/600/3-86/033.

Warshall, Peter. "Streaming Wisdom," from The CoEvolution Quarterly, Winter 1979/77.

Whyte, W. F. and Whyte, K. K. Making Mondragon. Ithaca, New York: Cornell University, 1991.

Yudelson, Jerry. Excerpt on watersheds. Truck 18: Biogeography Workbook.