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Bioregioning Is Our Future

Lately I've been reading Andrew Schelling's *Tracks Along the Left Coast*, a biography of linguist, anthropologist, and anarchist Jaime de Angulo (1887-1950). De Angulo was a character worth knowing about. His affluent Spanish parents gave him a civilized upbringing in fashionable Paris; nevertheless, he had a wild streak. So, before he turned 20, de Angulo hightailed it to San Francisco, arriving just in time for the Great Quake of 1906. During the next few years, he earned a medical degree, then worked as a cowboy trekking the California coast. The Native Americans he met fascinated and impressed him. As a way of documenting and preserving their way of life, which he regarded as perfectly adapted to the endlessly varied, stunningly beautiful landscape around him, de Angulo (often collaborating with his linguist wife, Lucy Shepard Freeland) learned and described 25 of the roughly 100 Native languages then spoken in California. "Salvage linguistics," anthropologist Franz Boas called it.

De Angulo grew to trust and admire the Native Californians with whom he spent most of his time—when he wasn't navigating the politics of the Berkeley anthropology department. Though he knew Carl Jung, Arthur Miller, and D. H. Lawrence, he came to have little regard for most non-Natives.

Reading de Angulo is a window into a world in which the Old Ways (as he called them) still survived, a world devoid of today's freeways, airports, smart phones, and sprawling suburbs, one in which Coyote still imparted his trickster wisdom and people spent a good part of each day sitting by the fire and sharing mythic stories about animals, rivers, trees, and ancestors. Here's a passage from de Angulo's *Shabegok*, published posthumously:

> "The Habe-Napo live on the western shore of Clear Lake, and this is a mountain lake, fairly large, some one hundred miles northeast of San Francisco. This is a pleasant region of small fertile valleys where wild roots and seeds once grew in abundance; where acorns, laurel nuts, buckeye chestnuts, were once plentiful; where the streams were once stocked with fish; where the hillsides were once covered with numerous bands of deer. The lake itself, surrounded by mountains, teemed with fish, and flocks of aquatic birds of all kinds were constantly flying

> by."

The Native people of the region played an active role in maintaining its biological richness. They painstakingly nurtured habitat for food plants and animals, such as oak trees and freshwater fish, and for the reeds and trees that provided materials for baskets, houses, boats, clothing, and tools. The arrival of hordes of Euro-Americans was a catastrophe not just for the Native peoples (the genocide of Native Californians is a story for another occasion), but also for the ecology of the region. Here's how Schelling puts it:

> "The settlers brought new ideas about the land. Ranches, huge farms, and orchards, with all their heavy equipment, replaced the light, micro-environment use by Indians. Native trees, wetlands, wildlife habitat, waterfowl came under siege. The Pomo dialects withdrew beneath official American English. Today even the ranchland is threatened. Clear Lake is known for recreation. It is a 'hot new wine destination.'"

Today the damage continues via globalization, toxification, and climate change. Now, extrapolate this dismal pattern of cultural and biological simplification and ruin to thousands of other bioregions, where intergenerational ties between people and land have been uprooted by colonialism and high-tech commerce.

How best to understand rooted societies and what has happened to them? From my perspective as a writer on energy and society, de Angulo was preserving traces of how low-power societies naturally evolve. Physical power—defined by the rate at which energy flows through a system—organizes stars, ecosystems, and human societies. Unleashed too fast, power can also destroy systems. In societies, physical power often manifests as social power—the ability of small groups of people to influence the behavior of much bigger groups.

Money, metal weapons, and writing, with help from germs and belief systems based on concepts of human dominion and European exceptionalism, enabled a European takeover of most of the rest of the world, starting 500 years ago. Then, when we humans adopted concentrated, storable energy sources from fossil fuels two centuries ago, all hell broke loose. Larger polities emerged—megacities and great nations—along with more effective tools for shaping mass behavior. Low-power societies, by contrast, usually show up as villages or small bands composed of individuals with a high degree of autonomy in thought and action. High-power societies, which most of us today regard as normal, are recent and temporary. They have overwhelmed low-power societies across the planet. The story of power had many pre-petroleum subplots, but, once coal, oil, and gas appeared as lead characters, a tragic denouement became inescapable.

Humanity soon will be returning to low-power ways of organizing itself. I won't make a detailed supportive argument for that statement here; I've done so for a quarter of a century in books and articles. Suffice it to say that fossil fuels are finite and rapidly depleting, and alternative energy sources cannot fully replace them. Therefore, our current size of population and scale of social organization will not be maintained. Humanity will inevitably downsize. The process of doing so, whether intentional or inadvertent, will

define the human experience and determine the fate of the planet for the next century and beyond.

Several overlapping terms have been proposed as banners around which to rally people willing to participate in scaling down society intentionally, to minimize the mass trauma that will otherwise occur as humanity crashes against Earth's limits. *Degrowth* refers to proactively reducing the size of the human economy so that it fits within planetary boundaries and redistributing its outputs more equitably. *Localization* (or *re-localization*) refers to reducing the scale of trade so that products are once again made regionally. *Re-indigenizing* describes the shift in cultural practices that must accompany a return to living in place.

Then there's a set of words that I'll especially focus on here: *bioregion*, *bioregional*, and *bioregioning*. These related terms emphasize the role of ecosystems and natural boundaries, such as watersheds, in limiting, shaping, and psychologically grounding human societies. (There are still more terms relevant to this general line of discussion, including The Simpler Way, permaculture, and ecovillages. So much to talk about, perhaps on another occasion.)

In this article, I'll mention some of the strongest advocates for bioregioning, who've explained why it would lead to better outcomes for people and planet. Theirs is essentially a normative argument. But, at least to me, necessity is the deal-clincher: we're headed toward a smaller-scale, more localized way of organizing society, like it or not.

So far, the number of people attracted to degrowth, re-localizing, re-indigenizing, and bioregioning movements is small. Thus, it's probable that the intertwined fates of society and nature will be determined more by failure of supply chains and support services, by resource depletion or toxification of ecosystems, and by the disunity of larger governance systems than by deliberate bioregional design projects. But, in our new age of tariff wars, the tide is already turning from global to regional in trade, investment, and politics. So, what has seemed impossible may become obviously necessary to larger numbers of people.

Finally, and crucially, we'll explore what bioregioning requires of us.

Bioregioning Voices

The word bioregion was first used in a scholarly paper in 1959, to describe blue crab populations in Louisiana—seemingly an inauspicious start. However, during the next two decades several important books appeared in which the related term bioregionalism was used to envision a societal program of reconnecting people with local ecosystems. By 2023, over 4,000 books and articles were cropping up yearly with bioregion in their titles.

One of the first authors to take up the bioregionalism banner was Peter Berg (1937-2011), who, somewhat following in Jaime du Angulo's footsteps, was an anarchist, activist, and amateur biologist-anthropologist working primarily in northern California. After attending the 1972 United Nations Conference on the Environment, Berg concluded that environmentalism needed grounding. He described a bioregion as "a geographic area defined by natural

characteristics, including watersheds, landforms, soils, geological qualities, native plants and animals, climate, and weather . . . [which] includes human beings as a species in the interplay of these natural characteristics." In 1973, Berg founded Planet Drum Foundation, an organization educating the public about bioregionalism, and networking local groups in the United States and internationally. His key works were republished in 2015 in The Biosphere and the Bioregion: Essential Writings of Peter Berg, edited by Cheryll Glotfelty and Eve Quesnel.

In 1985, Kirkpatrick Sale, a writer on decentralism and a technology critic, published *Dwellers in the Land: The Bioregional Vision,* the first prominent book to articulate a systematic argument for bioregioning.

The floodgates had opened. In 1990, New Society Publishers edited and released Home! A Bioregional Reader. Wes Jackson's Becoming Native to this Place appeared in 1994. And poet Gary Snyder's A Place in Space followed in 1995, along with Stephanie Mills's In Service of the Wild: Restoring and Reinhabiting Damaged Land.

By the mid-1990s, it's fair to say that nearly all well-read environmentalists were acquainted with bioregionalist terms like *watershed*, *foodshed*, and even *fibershed*. Bioregionalism had come to greatly influence, if not dominate, environmental discourse.

Even many authors who rarely used the word bioregionalism offered an essentially bioregionalist message. Terry Tempest Williams's Refuge: An Unnatural History of Family and Place (1991) explored the culture and ecology of the Great Salt Lake. Helena Norberg-Hodge's Ancient Futures: Learning from Ladakh (1991) explained how good life was in an Indigenous Himalayan society prior to globalization, and how that society is changing under the pressures of modern electronic communications and commerce. Barbara Kingsolver's novels Prodigal Summer (2000) and Flight Behavior (2012) likewise explored the intergenerational relationships between humans and their local environment. More recently, Robin Wall Kimmerer's Braiding Sweetgrass (2013) wove together Indigenous wisdom, scientific knowledge, and the teachings of plants, fostering a deep respect for place.

Of course, bioregionalism isn't just a literary movement; it is also an activist program. Examples are legion, including the Green Belt Movement in Kenya, founded by Wangari Maathai, which focuses on community-based tree planting for environmental conservation and women's empowerment; and the formation in 1999 of *Arvari Sansad* (a farmer's parliament) by 65 villages in the Arvari River watershed in the Indian state of Rajasthan. Closer to my home, Winona LaDuke's White Earth Land Recovery Project purchases land to return it to Native control and the Cascadia Department of Bioregion seeks to "protect the environment, increase local autonomy, and reverse the harms of colonial systems by building an interconnected network of bioregional movements across North America and the world."

Its advocates say bioregionalism addresses human problems across three dimensions—psychological, social, and environmental.

Psychological: Humans evolved in relatively small communities with lots of

face-to-face interaction and contact with nature. Research shows that democracy often thrives best in small communities and that direct engagement with nature makes us happier and smarter.

Social: Research also shows that extreme inequality in wealth makes people miserable and makes societies vulnerable to collapse or revolution. The growth of inequality seems to be a nearly inescapable side effect of the emergence of great nations and empires. Small, local communities tied to bioregions tend to feature much less concentration of power and, historically, many have developed durable methods of preventing inequality from gaining hold. The potlatch is one such method.

Environmental: Long-term habitation of a place leads to understanding of the opportunities and vulnerabilities of that place. This understanding then leads to intergenerational cultural traditions to limit exploitation of resources; to protect plants, animals, soils, and water; and to develop reverential relationships with the other-than-human world.

Bioregionalism's proponents may focus more on one or another benefit. All tend to agree on two things—what bioregionalism is against and what it's for.

Bioregionalism pushes back against globalization, industrial uniformity, perpetual economic growth, fossil fuels, and colonialism, against a rootless system where everyone buys products made by global-scale corporations, made from resources extracted across the planet, and delivered by high-powered transport modes. It is a system in which people's wants and expectations are utterly disengaged from what their local regions can supply, from the traditions of their ancestors, and the impacts of human activity on the rest of nature. It is a system destined to fail spectacularly, and whose failure is already evident in climate change, the disappearance of wild nature, and the depletion of resources such as fresh water, topsoil, forests, minerals, and fossil fuels.

Bioregionalism encourages the emergence of politics, language, art, food, construction methods, traditions, and stories related to local regions defined by geology and biology. It fosters the integration of people and their livelihoods into the places they inhabit, and it promotes egalitarian social arrangements.

The Work of Bioregioning

Bioregionalism is a philosophy; its practice is *bioregioning*. How does one do it? Here are three broad categories of knowledge to acquire and actions to take.

Land. Get to know your bioregion—its features, its history. What makes it a distinct bioregion? What are the plants and animals native to your place? What is its topography? What is its climate? Where does water flow and collect? What are its soil types? How do land and water change with the seasons? What is your bioregion's geological and biotic history? And finally, how is your bioregion changing due to industrial development and climate change? How could it be managed to promote long-term biological variety and richness? If you can: plant (and promote the planting of) native species. Participate in local creek clean-up efforts.

People. What's your bioregion's history of human habitation? Who was here longest? Where are their descendants now? What did they eat? What materials did they use for tools and housing? How has human habitation changed in very recent times? What stresses on people and nature are these changes bringing? How could people best re-integrate themselves into the rhythms and flows of local ecosystems, while also obtaining their livelihoods?

Culture. What were practices and celebrations of the people native to your bioregion? What was their language? What celebrations, rituals, laws, and customs tied people to land? What practices helped with redistribution, to minimize economic inequality? What practices helped maintain biodiversity while also serving human needs? What music, dances, entertainment, humor, and art were and are characteristic of your bioregion? What are current efforts to maintain local cultural practices and traditions? Culture makes bioregionalism fun and beautiful.

In most respects bioregionalism and environmentalism align. But bioregioning can occasionally depart from some people's concepts of what's good for nature. Conservation-based environmentalism has sought to undo the damage to nature from colonialism and industrialism. But often its objective has been simply to leave nature alone to recover; the less human interaction, the better. However, for the last few thousand years at least, landscapes around the world have evolved with human habitation and participation; and, as Lyla June Johnston has documented in her recent PhD thesis, "Architects of Abundance," Indigenous people who stayed in place long enough were able to maximize biodiversity while also meeting their own needs. The bioregional vision is to re-evolve complex, sustainable, locally adapted culture/ecosystem relations through active human contribution to ecological health (here's one example).

There's another way in which bioregionalism and some schools of environmentalism diverge. After the 1990s, environmentalism understandably began to focus more on global issues. Climate change became its main concern, and technologies to replace fossil fuels (mainly solar panels and wind turbines) were widely seen as the "solution." Becoming Indigenous to place took a back seat to technology, investment, and the extraction of minerals for solar panels, wind turbines, and batteries—often putting under siege some of the planet's remaining biodiverse and Indigenously-stewarded ecosystems. This partial and temporary eclipse of the bioregional vision confused issues and delayed the only sensible response to modern society's existential dilemma. Now that it's clear that the fabled "energy transition" from fossil sources to renewables is faltering, perhaps bioregionalism is poised for a needed comeback. Meanwhile, the failure of global climate action means local ecosystem restoration is our most promising path to a livable future.

Other trends are also encouraging or forcing people to think more locally and less nationally or globally. As national and international politics and economics become more cut-throat, localism seems to some like a strategic retreat. In the US, there is talk of secession of states or bioregions. Still, bioregionalism is more than political self-defense or a fallback strategy. It's a map to long-term sanity and survival.

Even if a revival of bioregionalism is inevitable, it faces problems of scale and speed. Learning about my own bioregion of the Russian River (the Southern Pomo called it Ashokawna) watershed of northern California has revealed a challenge: the people who would become Native Americans arrived here perhaps 10,000 years ago but arguably did not reach a condition of stable and sustainable bioregional adaptation until much later, perhaps 3,000 years ago. During the intervening millennia people evidently made some significant mistakes, notably by overharvesting mastodons and other large mammals. Once the megafauna were gone, a long period of re-calibration followed. It took thousands of years for environments that had co-evolved with megafauna to restabilize, and for humans to find durable ways to fit into and optimize this new regime. Today we face even greater disruption due to human overreach and the speed with which carbon dioxide and other greenhouse gases are being released. We will need to minimize the time required for re-adaptation and grapple with the loss of some of the core elements of what made bioregions unique.

The work of rebuilding bioregional culture will have to proceed in the context of planetary breakdown and societal conflict. That's not a situation any of us would choose, but here we are. Fortunately, living in locally land-adapted cultures has its own rewards. It's how humans evolved and how we lived for millennia. It feels right, like coming home.