

RIPPLES IN CLIO'S POND

Mosaic Landscape and the Human Organization of Space

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Henry David Thoreau took a daily walk in the country around his hometown, during which he kept himself intensely observant of nature and human activities. He undertook this activity as a matter of principle—a daily pilgrimage. Thoreau once remarked that he had traveled widely—in Concord, Massachusetts.¹ An intentionally paradoxical statement, it is nonetheless true in the sense that the landscape through which he moved was composed of many interacting biomes and cultural uses.

As a mosaic is formed of tesserae, the individual colored pieces that make up the pattern, a landscape consists of sections resulting from natural conditions or changes caused by human use. Fields and forests, groves and gardens, towns and temples, and seas and streams form the component pieces of a landscape mosaic; while they provide diversity, they also form a larger unity. In a mosaic on a floor, wall, or ceiling, the meaning is seen in the picture formed by the tesserae. In the landscape, it is found in the integrity of the whole ecosystem. The integrity of nature, in the sense of the completeness of the ecosystem that is present in a place, invests that place with power and lays a claim on sentient beings to respect and to care for it.²

Some of the landscape tesserae are unmodified by human activities. However, one might argue that no place on Earth is now unaffected by human presence, since chemical and radioactive substances of human manufacture have diffused to every part of the atmosphere, making it close to impossible to find a large segment of the Earth's surface that has escaped human presence. But there are still many sections of landscape that are largely shaped by extra-human processes. Even these are invested with human meaning, meanings intimately connected with, and to a large extent determined by, their physical state and the ecological changes that they undergo.

Landscapes unmodified by human action also display a mosaic pattern. Local manifestations of the ecosystem differ with soils, microclimates, topography, the record of fires and other disasters, the history of evolution, and the arrival of new species from elsewhere. An almost undisturbed tropical forest, such as sections of the rainforest in the western Amazon basin, exhibits a series of very different assemblages affected by flooding, elevation, windfalls, etc.

What is it in such a landscape that most engages the sensitive observer? Surely it is the fullness and variety of life that invests it: the number of species, the occupation of every available space, and the endless profusion of living patterns.³ In such an environment, one might perhaps become convinced of the ancient Gnostic idea of the *pleroma*: that in order for the potential of creation to be expressed fully, manifested creation must contain every possible form. But there is another realization beyond that, born of the observation that all these facets interact to form a whole. Harmony exists in a landscape when the whole has an embracing configuration, while the

¹ Henry David Thoreau, *Walden* (Boston: Ticknor and Fields, 1854), p. 2.

² J. Donald Hughes, "The Integrity of Nature and Respect for Place," in Rana P. B. Singh, (ed.), *The Spirit and Power of Place: Human Environment and Sacrality* (Varanasi, India: National Geographical Society of India, 1993), p. 11.

³ J. Donald Hughes, *An Environmental History of the World: Humankind's Changing Role in the Community of Life* (London: Routledge, 2001), pp. 217-219.

parts have variety and contribute to the configuration. The mosaic in art and the mosaic landscape of Earth differ in at least one important respect, and that is that the landscape is continually changing.

The early changes wrought by human activity in the landscape added elements to the natural mosaic. Generally speaking, humans may be observed to prefer ecotony (the presence of edges between contrasting communities of vegetation) to uniformity. In an unbroken forest, humans make clearings and show a predilection for placing their dwellings in or near them. In open country, they show an equally strong propensity for planting trees and groves. When clearing land for agriculture, cultivators may spare patches of trees, investing them with sacredness and protecting them from generation to generation. In parts of the Western Ghats of South India, for example, sacred groves of moist evergreens are valuable defining pieces within a landscape that includes villages, rice paddies, rivers, pastures, fields of crops, deciduous forests, spice gardens, ponds, bamboo, plantations, and isolated free-standing sacred fig trees.⁴ Their arrangement is not haphazard but reflects the underlying geology, the paths of celestial events, and the places where myth and history have resonated, binding cultural meaning to the fabric of the land.

There is an integrity of human occupation of the land that is reflected in this kind of mosaic, or at least in much of it. Of course humans also make lacunae in the mosaic, spoil pieces of it, or insert inappropriate bits. There is always the danger that the mosaic may lose its coherence as a result. The judgment as to which pieces fit where can only be made with knowledge both of local conditions and the overall image of the mosaic. A tessera that is useful in itself may be damaging out of place, like a parking lot in an ancient redwood grove.

The various tesserae of the mosaic landscape interact with one another in many ways. A spice garden, for instance, may depend on a nearby forest for an unfailing supply of water and green fertilizer. To give another example, fish in a pond subsist on the organic material that falls in from neighboring trees or is washed in by rainfall and streams. Mosaic landscapes manifest ecotony in that they possess many microhabitats adjoining one another. Within a single square mile, there may be many miles of borders, with the opportunity for organisms to travel across them and to find a number of varying niches. Thus a mosaic landscape provides the support for a higher degree of biodiversity than that found in a monoculture. But how can such a pattern reemerge to replace the destructive one that now occupies a major portion of the surface of the Earth?

A way of seeking an answer to the question may lie in investigating the meanings that humans have found in the landscape and the tesserae of which it is composed. These meanings often are expressed in traditional regard for specific places. In particular, sacred groves have been, and in many cases still are, protected by local people in different parts of the world. These groves, which are as a rule surviving protected patches of the original forest, provide refugia where species of animals and plants that are endangered elsewhere, may persist. The mosaic needs these pieces for its health and beauty; its integrity is maintained by the presence of the indigenous biota contained in them.

The role of wilderness is similar and has been much misunderstood in recent debate over that word.⁵ Wilderness is not something apart; it is one kind of piece within the mosaic that interacts

⁴ M. Chandran, D. Subash, and J. Donald Hughes, "The Sacred Groves of South India: Ecology, Tradition 1997. Communities and Religious Change," *Social Compass*, 44, 3: pp. 414.

⁵ William Cronon (ed.), *Uncommon Ground: Toward Reinventing Nature* (New York: W.W. Norton, 1995).

with and enriches the other parts. It does not exclude human use. Indeed, wilderness is a human concept and a form of human use, although wilderness must retain its integrity to achieve its function, and certain kinds of human use must be excluded in order to maintain that integrity. Accordingly, Thoreau's concern about the loss of wildness was fully justified.⁶ Wilderness tesserae join with other parts of the mosaic to create a larger pattern within which humans can follow lives that are physically and spiritually fulfilling. The landscape mosaic would be incomplete without sections of wilderness, which are necessary as refugia for biodiversity, as providers of water and clean air, and as protectors of soil from erosion. The placement of wilderness within the mosaic is important. The concept of biosphere reserves that originated in the United Nations, with adjoining buffer zones within which traditional land uses would be fostered, might be a way of accomplishing that placement.

What is the meaning of the mosaic? It is found in the pattern, and each tessera forms part of the pattern. Some of the pieces are more striking than others, but each has a place—an appropriate *topos*.

In forming the meaning of the landscape mosaic, certain tesserae are sites famous in mythology and religion. For example, a temple and sacred pond south of Kumta below the Western Ghats marks the spot where a great stone was cast down by Lord Shiva on his arrival in the area.⁷ Native American Indians recognize many such features; the Navajo country is dappled with them.⁸ In New Mexico, a giant bird monster after a fatal encounter with the warrior hero twins was turned into a winged rock called Shiprock, according to Navajo tradition. A lava field was the congealed blood of the giant Yé'itsoh. A conspicuous isolated mountain was the birthplace of Changing Woman. Other places mark the events of traditional history. The Havasupai see the Wigleeva, two upstanding rocks on the rim of their Grand Canyon home, as two ancestors, a man and a woman, who decided to leave the valley given to them by the gods and were turned to stones that embody the spirit of the tribe itself.⁹

Greek pilgrims along the Sacred Way from Athens to the Temple of the Mysteries of the Earth-goddess Demeter and her daughter Kore at Eleusis passed shrines carved into the living rock, sacred lakes, a bridge over a stream, a well, a cave, and so forth.¹⁰ The country in South India through which pilgrims pass on their way to worship the tiger-riding god Ayyapa is crowded with places associated with personages and events in the Hindu epic *Ramayana*.¹¹

Nations have hallowed historical spots: the field of Marathon where the Athenians turned back the Persian invasion, Plymouth Rock where the pilgrims first set foot in the New World, the pyre beside the Yamuna where Mahatma Gandhi's body was cremated. Henry David Thoreau's

⁶ Brian Donahue, "Henry David Thoreau and the Environment of Concord," in Edmund A. Schofield and Robert C. Baron, (eds.) *Thoreau's World and Ours: A Natural Legacy* (Golden, CO: North American Press, 1993), pp. 182.

⁷ Surinder Mohan Bhardwaj, *Hindu Places of Pilgrimage in India: A Study in Cultural Geography* (Berkeley and Los Angeles: University of California Press, 1973).

⁸ Gladys A. Reichard, *Navajo Religion*, (Princeton: Princeton University Press, 1963), p. 22.

⁹ Terence Hay-Edie and Malcolm Hadley, "Natural Sacred Sites—A Comparative Approach to Their Cultural and Biological Significance," in P.S. Ramakrishnan, K.G. Saxena and U.M. Chandrashekara (eds.), *Conserving the Sacred for Biodiversity Management* (Enfield, NH, and Oxford: UNESCO, Science Publishers Inc. and New Delhi and Calcutta: IBH Publishing Co. Pvt. Ltd., 1998), pp. 47-67.

¹⁰ Matthew Dillon, *Pilgrims and Pilgrimage in Ancient Greece* (London: Routledge, 1997), pp. 62-65.

¹¹ Radhika Sekar, *The Sabarimalai Pilgrimage and Ayyappan Cultus* (Delhi: Motilal Banarsidass Publishers, 1992), p. 64.

Concord and Walden Pond constitute “America’s most sacred literary place”¹² and attract hundreds of thousands of people annually.

More personal *topoi* have their significance too: the country graveyard, the homes full of family memories, a child’s favorite tree in the garden, visited once more with reverence by the same child as an elder. These shards of culture interpenetrate the segments of nature to form the mosaic. Both are spiritual stimuli for the psyches of those who live near and travel through them. One of the purposes of pilgrimage may be to discern the larger pattern, natural and cultural, within which humans live.¹³

Unfortunately, patterns like those found in the Western Ghats and the primal Navajo country are not universally found in human alterations of the landscape. The prairies and Great Plains of the central and western United States, for example, were surveyed in rectilinear units that took no account of the features actually existing on the ground. A single use—agricultural cropping—was envisioned for each segment regardless of its suitability for that purpose. There was no plan to leave any sections in their original state, and only recently has there been an attempt to preserve fragments of the primeval vegetation, or to attempt to reestablish native species in preserves.

What is it about the land survey that offends against the idea of the mosaic? It forces inappropriate uses on localities and opens the soil to wind and water erosion. The pattern of regular squares ignores the reality of landscape—the natural mosaic that was in place before human occupation, and the human mosaic created within it by the inhabitants: the courses of streams, the emergence of springs, the underlying geological structures, the places hallowed by events of mythology and history, the lives lived there by humans and other creatures through generations and millennia. Yet even the land survey, with its original intent to cover the plains with small farms, is also history. And through exceptions made due to the exigencies of human experience with the life of the land, it might through long use—indeed, a variety of uses—evolve to form an organic mosaic.

Such a transformation into a pattern of integrity is, unfortunately, not the history of much of the human occupation of the Earth. With industrial agriculture, which has replaced much of the small farm landscape, the hedgerows have come down, and the pieces of the mosaic have been obliterated by monoculture over huge areas, with waves of wheat continuing mile after mile, or vast plantations of coffee and rubber replacing native forests and villages. Huge dams create reservoirs, like that soon to rise behind China’s Three Gorges Dam, which will flood the fields and towns of more than a million people. The high technology industry and its attendant developments have spread across the Santa Clara Valley, formerly one of the richest horticultural regions in California. Urban developments often present the aspect of treeless suburbs with identical houses or apartment buildings and vast areas given over to asphalt and the automobile, in ugly contrast to the mosaics of livable cities like Florence and Victoria, which have parks, squares, historic architecture, and places where birds can nest and people can walk and sit.

Areas where natural processes predominate are essential to the sustainability of the landscape and to the health of human interaction with it. When humans impose monoculture upon the mosaic, they may destroy its structure and make it impossible for themselves to live within it in a satisfactory way. For example, salt has been rising to the surface of the land surrounding Australia’s largest river

¹² Lawrence Buell, *The Environmental Imagination* (Cambridge, MA: Harvard University Press, 1995), p. 316.

¹³ Eleanor Munro, *On Glory Roads: A Pilgrim’s Book about Pilgrimage* (New York: Thames and Hudson, 1987).

system—the Murray-Darling Basin—as a result of the almost total replacement of native vegetation by irrigated crops and pasture. Salinization is making the land unusable for agriculture, grazing, and wildlife. Ecologists sensitive to the problem state that no single option will halt the growth of salinity in the ground and rivers and advocate a combination of land uses that suit the diverse climate, soils, and water conditions of the Basin. They recommend creating a new landscape, a mosaic of uses such as tree crops, mixed perennial-annual planting systems, and areas of native vegetation to help keep the water and soil healthy as they did before European occupation.¹⁴

If humans desire a future when they may inhabit the Earth sustainably, they must embrace the concept of the landscape mosaic as an organizing principle. What sustainability means, in this respect, is that the human species finds its *modus vivendi* within nature, without the mutual destruction of nature and culture. Monoculture, the destroyer of the mosaic, is inextricably involved with mechanization and the enslavement of the human body and spirit along with nature. The mosaic keeps the landscape at a human scale and provides a variety of bases for human fulfillment within both cultural and ecological communities. Maintaining the variety of elements within the mosaic, and preventing effacement by huge, land-altering projects is therefore a moral imperative. The pattern needs many tesserae formed by areas that retain some degree of integrity in order to provide an abundant environment for life. The Earth itself is a living mosaic community,¹⁵ and human organization can interact with its pattern, creating a place for communities within it.

¹⁴ Murray-Darling Basin Commission, “Draft Integrated Catchment Management Policy Statement” and “Draft Basin Salinity Management Strategy,” Canberra, Australia, 2000, online at: <http://www.mdbc.gov.au>. Reported by, Environment News Service (ENS), September 5, 2000.

¹⁵ Larry L. Rasmussen, *Earth Community Earth Ethics* (Maryknoll, NY: Orbis Books, 1996), pp. 324-328 and Hughes, 2001, *op. cit.*, pp. 5-7.