

# “In Gaia’s Garden: Reflections on John Lyle’s Approach to Protected Areas”

By

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## **Introduction**

In *Regenerative Design For Sustainable Development*, John Lyle suggests that in a regenerative world the governing metaphor for the human relationship with nature should be “global garden.” The current metaphor, he argues, is “the machine, symbol of mechanistic means,” but if instead “we imagine ourselves cultivating Gaia’s garden in the 21<sup>st</sup> Century, then we can also imagine moving the machine out, step by step, as it is replaced by the inner processes of the landscape itself.”<sup>1</sup> It will, of course, be a working garden rather than a pleasure ground, but we will, Lyle insists, be able to “take a great deal of pleasure in it.”<sup>2</sup> In addition, it will look very different from the degenerating landscapes of the Twentieth and early Twenty-first Centuries. The “working landscape” will displace much of the industrial technology that dominates today’s world and “natural processes will be doing much of the work now done unsustainably and unregeneratively by steel, concrete and fossil fuels.”<sup>3</sup> Furthermore, not every portion of the garden will be the same, but in contrast to today’s landscapes, a regenerative world’s component land uses will blend and merge smoothly so that the

green of nature will flow into the gray of cities and vice versa. (Figure 1) "Boundaries," Lyle insists, "will not be hard lines but gradual transitions."<sup>4</sup>

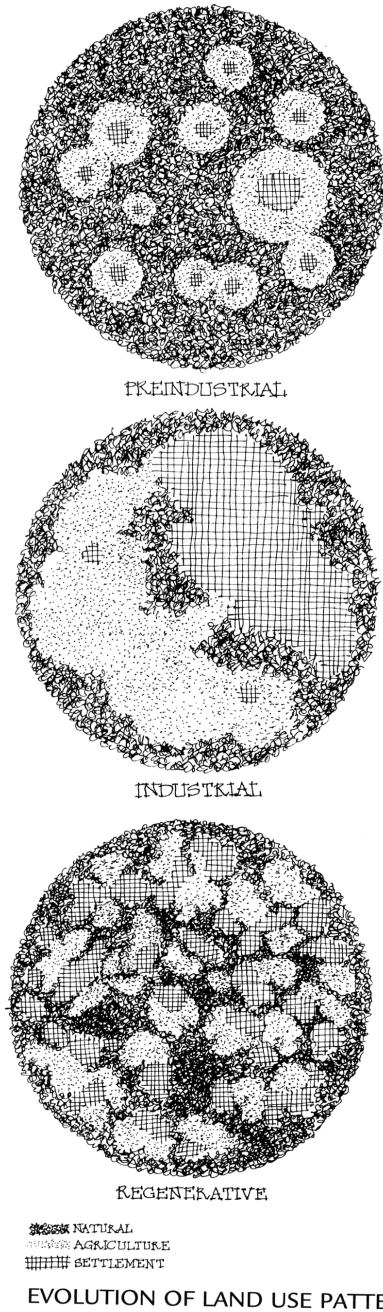


Figure 1. In Lyle's view, land-use patterns had gone from being scattered and relatively homogeneous in the past to fused and specialized. In the future, he envisioned a regenerative land-use pattern that would include "Natural Reserves." (from *Regenerative Design for Sustainable Development*, 287)

To illustrate how this regenerative landscape might appear, Lyle begins by focusing on the value of what he calls “Natural Reserves” – “the areas of the garden left untended but protected.” Essentially wilderness, Lyle sees these areas becoming the central cores for Biosphere Reserves, which will then function both as protected areas and as “nuclei for innovation in regenerative management.”<sup>5</sup> What I will do in this paper is argue that Lyle’s approach was, on the one hand, too limited to be useful, but on the other hand, more tentative than necessary because time, education and economic pressures have favored an approach he praised, but feared would fail.

### **Into The Garden**

Gaia’s Garden will consist mostly of the gray-greens that occur when cities and nature blend, so “the purest colors will be the wild reserves dotting the earth,” explains Lyle.<sup>6</sup> Ideally, a natural reserve would be a minimum of 400 km<sup>2</sup> (approximately 160 mi<sup>2</sup> or about 1/8 of Yosemite NP), but since the first purpose of these reserves would be ecological, “the actual minimum size in each reserve [would] depend on the particular needs of the top predator species.”<sup>7</sup> A 400 km<sup>2</sup> reserve would be too small for mountain lions (*Felis concolor*), for instance, because it would support only 15 to 20 adults, which is too few for long-term viability.<sup>8</sup> In most situations, Lyle envisioned these protected areas as “libraries of species, communities and ecosystems”; reminders of “how nature works without the added complications of human technology” and as baselines against which “all human ecosystems are measured.”<sup>9</sup> This vision fits well

with the ecological literature about the purpose and value of protected areas.<sup>10</sup> Lyle estimated that approximately four percent of the Earth's land surface was in protected status and he did not imagine that any more than 10 percent would ever be protected. Fifteen years later it remains difficult to determine exactly what percentage of Earth's terrestrial surface is protected, but it is likely that no more than six to eight percent receive any protection today.

Continuing, Lyle declared that, "There will be no roads or other developments in [natural reserves]. Every effort will be made to prevent technological influences from altering the landscape."<sup>11</sup> Such a definition would likely appeal to many Americans because it is very close to our nation's definition for wilderness, but it is problematic if one wishes to use protected areas in an effort to foster regeneration both in the U.S. and internationally. As William Cronon points out, wilderness has a "peculiar history" and it is not natural. Rather, wilderness is "quite profoundly a human creation."<sup>12</sup> Detailing wilderness's history, Cronon lodges it firmly in the American experience of the Sublime, which is imbued with sacredness, and the frontier, which looks backward toward "simpler, more primitive living."<sup>13</sup> One consequence of this "wilderness ethic," he declares, is a perception that wild lands are "freer, truer, and more natural than other, more modern places" and that "urban-industrial civilization [is] confining, false, and artificial."<sup>14</sup> Ironically, Cronon concludes that wilderness has been no solution for the ills of modern urban life, but "a serious threat to responsible environmentalism."<sup>15</sup> Why, you may ask? Because, Cronon argues, "By imagining that our true home is in

the wilderness, we forgive ourselves the homes we actually inhabit.”<sup>16</sup> In other words, it will remain difficult to convince Americans and the many modern people who emulate them to act regeneratively where they live, which is mostly in cities, as long as they remain convinced that nature is fine elsewhere and that cities are not their proper homes.

In addition, wilderness is not the best vision for Lyle’s natural reserves because it is too categorical. Wilderness falls into the traditional nature-culture dichotomy that poses human activities and interventions as inappropriate at best and destructive at worst in any setting dedicated to natural processes. People may be destructive of nature and they often are, but they are not necessarily so. When we consider human-environment relations globally and historically we see that the relationship has been a continuum, not two poles. Finally, Lyle’s definition of a natural reserve does not allow for people’s productive activities. Instead, it treats these reserves as places for research or consumption, which makes them an awkward fit for biosphere reserves.

In Gaia’s Garden, some natural reserves will become the central cores for biosphere reserves, which are areas designated in [UNESCO’s Man and the Biosphere Programme](#) as both protected areas and as laboratories for sustainability. According to UNESCO, at the core of a typical biosphere reserve is a protected natural area where only a handful of activities can occur. On the one hand, biological monitoring and research are allowed, which fit fine with Lyle’s idea. On the other hand, however, low-impact productive activities, such as extensive grazing, are also allowed, which does not

fit Lyle's vision. This difference is admittedly small, but UNESCO, which includes people from many nations, not just Americans, provides for a nuanced and negotiable relationship between people and protected areas. Such an approach makes good sense and is practical. In a world of 6.5 billion people, many of whom live on landscapes that have been occupied since before history began, both conceptual and physical space is needed for simultaneous human production and for natural processes. Without this space, people will too often see protected areas as tools for alienating indigenous working populations so that those elites who either have passed the rituals which sanctify their efforts – i.e., scientists – and those who can afford to visit a park for leisurely consumption can benefit.

Surrounding a biosphere reserve's core is a buffer zone where human activities commonly occur, but they are limited to such ecologically friendly activities as environmental education, ecotourism and organic farming. No permanent settlements are allowed. Finally, one or more transition zones with settlements and a wide range of economic activities encircle the other zones. It is the transition zone that stimulated Lyle's interest because UNESCO defines it as a place of testing and experimentation; where pioneering approaches should be taken to achieve sustainable relations between nature and people. They can therefore be, as Lyle, phrases it, "nuclei" for innovations in regenerative management.

According to Lyle, a biosphere reserve's transition zone could include "farming, grazing, hunting, fishing, recreation, handicraft production, or almost anything else that

might be managed in a sustainable way."<sup>17</sup> Wherever sustainable techniques were successful, he envisioned they would spread into surrounding landscapes, thus becoming "agents of change rather than isolated units."<sup>18</sup> More specifically, Lyle was concerned about the "large areas of the earth's surface in badly degraded states."<sup>19</sup> They needed to move from degenerative to regenerative management and he felt that a biosphere reserve's transition zone was an excellent arena to begin the transformation. As an example, he presented the American Great Plains as a place where the change had already begun, if only in outline.

In 1987, Deborah Epstein Popper, a geographer, and Frank J. Popper, a planner, offered a proposal for dealing with what they called "an inevitable disaster."<sup>20</sup> The grassy plains that extend from Canada to Texas were rapidly deteriorating because the region's agriculture was "the largest, longest-running ...environmental miscalculation in American history."<sup>21</sup> If nothing changed, they argued, the plains were doomed to become an "utter wasteland" and an "American Empty Quarter."<sup>22</sup> Instead of continuing down this degenerative path, the Poppers suggested that the locals, with federal assistance, should return much of this landscape to native shortgrasses and the buffalo who once grazed on them. Following a federally funded de-privatization effort that would liberate the failing farmers and their' capital, the region's fences would be removed and the buffalo allowed to roam free on what was termed a "Buffalo Commons."

As much as Lyle endorsed the Poppers' proposal, he also hinted that it might never occur because "the farmers who inhabit the region have not been enthusiastic about this idea."<sup>23</sup> Despite Lyle's apprehension, the Buffalo Commons idea is flourishing. In the 20+ years since it was proposed, the locals and the Poppers have interacted with each other and with many other experts. From these exchanges has emerged greater support for the Commons because many individuals and organizations have come to see the ecologic, economic and social benefits of the change. In particular, opinions have become more supportive as incomes derived from the buffalo have increased. Both buffalo harvests and tourists "who are excited to see an animal they mistakenly thought was extinct" have provided the region with new and much needed sources of revenue.<sup>24</sup> These lifelines have made many of the region's residents more enthusiastic about the idea than when Lyle first embraced it.

### **Regenerative Protected Areas**

John Lyle was a cautious supporter of the Buffalo Commons, which he saw as an innovative and regenerative approach in a region he considered the equivalent of a biosphere reserve's transition zone. As we now know, he need not have been so provisional about the proposal's future. Although the final form of the Buffalo Commons is unlikely to match the original scheme, it seems that it will still help to regenerate the region and to place it on a more sustainable path. At the same time, Lyle's equation of his Natural Reserves with wilderness was a mistake. The American



experience produced the notion of wilderness, which makes it difficult to share with other nationalities, and it provides no room for human production, which now occurs virtually everywhere people live. If protected areas are to play a role in the regeneration of degraded landscapes, they must not be outside of the human realm, but allow for nuance and negotiation between people and nature.

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<sup>1</sup> John Tillman Lyle, *Regenerative Design for Sustainable Development* (New York: John Wiley & Sons, 1994), 284. See also Michael Pollan, *Second Nature, A Gardener's Education* (New York: Dell Publishing, 1991), who argues for what he calls a “garden ethic.”

<sup>2</sup> Lyle, *Regenerative*, 284

<sup>3</sup> Lyle, *Regenerative*, 284

<sup>4</sup> Lyle, *Regenerative*, 285

<sup>5</sup> Lyle, *Regenerative*, 285

<sup>6</sup> Lyle, *Regenerative*, 285

<sup>7</sup> Lyle, *Regenerative*, 285

<sup>8</sup> “Mountain Lion – *Felis concolor*” *National Geographic*,

<http://animals.nationalgeographic.com/animals/mammals/mountain-lion.html>. Accessed on 27 February 2010

<sup>9</sup> Lyle, *Regenerative*, 285

<sup>10</sup> See, for instance, Stuart Chape, Mark Spalding and Martin Jenkins, *The World's Protected Areas: Status, Values and Prospects in the 21<sup>st</sup> Century*, foreword by Achim Steiner and Julia Marton-Lefevre (Berkeley: University of California Press, 2008)

<sup>11</sup> Lyle, *Regenerative*, 285

<sup>12</sup> William Cronon, “The Trouble with Wilderness; Or, Getting Back to the Wrong Nature” In *Uncommon Ground; Toward Reinventing Nature*, William Cronon, Ed. (New York: W.W. Norton, 1995), 69.

<sup>13</sup> Cronon, “The Trouble,” 76

<sup>14</sup> Cronon, “The Trouble,” 77

<sup>15</sup> Cronon, “The Trouble,” 81

<sup>16</sup> Cronon, “The Trouble,” 81. Pollan, *Second*, similarly argues against the “wilderness ethic” and for his garden ethic.

<sup>17</sup> Lyle, *Regenerative*, 285

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<sup>18</sup> Lyle, *Regenerative*, 285

<sup>19</sup> Lyle, *Regenerative*, 286

<sup>20</sup> Deborah Epstein Popper and Frank J. Popper, "The Great Plains: From Dust to Dust" *Planning* 53  
(December 1987): 12

<sup>21</sup> Popper and Popper, "The Great," 12

<sup>22</sup> Popper and Popper, "The Great," 17

<sup>23</sup> Lyle, *Regenerative*, 286

<sup>24</sup> Deborah E. Popper and Frank J. Popper, "The Onset of the Buffalo Commons" *Journal of the West*  
45(Spring 2006): 32