



Regeneration

THEO STANLEY

School of Geography and the Environment, University of Oxford, UK

Regeneration is not returning to wilderness, restoring the past, or reproducing the present. Traceable to the Latin word *regenerare*, “to create again,” regeneration involves something rising or growing from the debris of what’s left. The upsurge of urban regeneration, regenerative agriculture, and regenerative economics perhaps signifies a moment in our contemporary zeitgeist. Although hard to define, and subject to appropriation by actors maintaining the status quo, regenerative theories and practices share a commitment to working with what’s already there, directed toward the creation of an open-ended future.¹

Environmental philosopher Michael Marder suggests that (an unspecified) “we” are trapped in a “Phoenix Complex,” blindly accepting that the ashes of industrial destruction are fertilizers that nourish new growth.² While Marder rejects faith that the metaphorical phoenix—forests, Society, or Nature—will rise again, I propose clinging to regeneration. In the burgeoning glut of “re-” words, regeneration offers a nuanced term for the environmental humanities, celebrating the world-making, creative potential latent in suppressed ecologies.

Scotland’s Ashes

Several thousand years ago Scotland was covered in trees. Historic climate change, and more forcefully, human hands, shrank forest coverage to just 5 percent by 1900.³ Forest cover has since grown to 19 percent, although most of this is non-native commercial conifer plantations.⁴ Since the Victorian era, native trees that died or were cut down

1. Cusworth et al., “Green Rebranding.”

2. Marder, *Phoenix Complex*, 1.

3. NatureScot, “History of Scottish Woodlands.”

4. Forest Research, *Forestry Statistics 2022*, 10.

have not been replaced by natural regeneration, the process in which trees grow independently of human planting. Today, inflated populations of deer—no longer hunted by their extinct predators like wolves and lynx, and fed overwinter by humans—eat tree saplings, suppressing the capacity for native woodlands to regenerate.

The 2020s has seen a flurry of interest in Scottish forest creation. For some rewilding ecologists in Scotland, ecologically informed reforestation involves prioritizing the natural regeneration of “wild trees,” the tree communities descended from native populations that recolonized Scotland after the last ice age.⁵ When wild trees regenerate, endemic species of plants, mosses, lichen, fungi, and animals can expand outward together in often surprising ways.

Facilitating the regeneration of wild woodland does not entail the return of a stable ecological baseline. Any such state simply does not exist in Scotland, given the extent of ecological and climatic variations over the last eleven thousand years.⁶ Allowing regeneration to occur is perhaps better understood as a step into the unknown, a “wild experiment” in which multispecies assemblages create unique ecologies.⁷

In reforestation efforts, ecology and economy pull landowners in competing directions.⁸ Echoing other stakeholders I interviewed, the senior executive of a rewilding NGO explained to me that although “regeneration is the holy grail,” tree planting provides “more guaranteed income.” Planting trees produces a “nature that capital can see,” stands of trees that are relatively easy to count, measure, and subsequently attribute carbon credits.⁹ Surviving ancient woodlands can be engulfed within new plantations or left to die while new plantations, often of the same tree species, are created to generate carbon revenue.¹⁰

Finding Fragments

When wild trees regenerate, surviving remnants of the past become the matter from which a future ecology can emerge. Prioritizing regeneration involves finding where these often fragile remnants are. As Mike, a well-respected Highland ecologist, put it in an interview, “the place matters, even if it’s fucked.”

Mike and I spent a summer ecological surveying, looking for small pockets of wild trees in Scotland’s seemingly barren moorland. Surviving forest fragments were few and far between. Looking for them was often heartbreaking. But in Scotland, as elsewhere, they do still exist.

One afternoon we found a lone Scots pine surrounded by scattered birch, rowan, and bog blaeberry, a major element of Scotland’s intact pinewood understory. The pine

5. Rainey, *Wild Trees at Glen Mallie*; Painting, *Regeneration*; Steven and Carlisle, *Native Pinewoods of Scotland*.

6. Steven and Carlisle, *Native Pinewoods of Scotland*.

7. Lorimer and Driessen, “Wild Experiments at the Oostvaardersplassen.”

8. Stanley, “Carbon Finance.”

9. Robertson, “Nature That Capital Can See.”

10. Stanley, “Carbon ‘Known Not Grown.’”

was the sole survivor of a deforested woodland, whose Gaelic name we found documented on a nineteenth-century Ordnance Survey map. Another afternoon we came across a high-altitude ravine holding a vibrant ecological community of willow, pine, and oak. In Scotland, ancient forests and their regenerative capacity have been condensed into a few trees.

Mike bemoaned how foresters looking to cash in on nature restoration have transcribed the same planting techniques from commercial forestry to native woodland creation. He lamented how “rewilding has been using the same model of tree planting as commercial forestry but has changed the tree species. It hangs onto the same system and people think it goes from being something damaging to something that’s brilliant!” Mike was not against planting trees per se. But he decried what he called “the commercial forestry mentality,” an uncritical preoccupation with counting, measuring, and planting trees.

Surveying with Mike, I learned firsthand how looking for hope in blasted landscapes was the first step toward a *regenerative* mode of forest creation that eschews modernity’s obsession with the plantation. Plantations, as anthropologist Sophie Chao reminds us, create “simplification, homogenization, and instrumentalization.”¹¹ Ecological conditions are canalized in the production of one resource. Regeneration offers an antithesis. Land is not treated as a homogenous tabula rasa but instead is understood as patches of multispecies history.¹² Circumstances are implemented for new ecological gatherings to emerge.

Facilitating regeneration does not require humans doing nothing, stepping away, abandoning. Regenerative interventions “use life to manage life,” tipping ecologies toward a new equilibrium state.¹³ Some nonhumans’ destructive capacities must be tempered, decanalizing ecological conditions to allow other nonhuman communities to flourish. In Scotland, this involves erecting fences and, more fundamentally, killing deer, to protect regenerating saplings.

Regenerating Hope

Perhaps Marder’s Phoenix Complex diagnosis is fair. There is not an “infinitely self-regenerative capacity inherent to finite existence.”¹⁴ After all, a forest cannot grow back when all its trees are cut down. But blowing on embers is a better metaphor than waiting for ashes to spontaneously metamorphize.

Regeneration captures the environmental humanities’ shared understanding that humans are not the only species with world-making power. More-than-human communities rework previous generations’ contributions with creative force, generating the present and future from what’s left. When ecologies regenerate, the place matters, even if it’s fucked.

11. Chao, “Plantation,” 362.

12. Tsing, Mathews, and Bubandt, “Patchy Anthropocene.”

13. Lorimer, *Probiotic Planet*, 2.

14. Marder, *Phoenix Complex*, 1.

THEO STANLEY is a cultural and environmental geographer based at the University of Southampton. He recently completed his PhD at the University of Oxford, where he researched the political ecologies of nature restoration, carbon, and forestry in the Scottish Highlands.

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