



# Unmaking Soil Mastery

## Postscript

LESLEY GREEN

*Environmental Humanities South, University of Cape Town, South Africa*

Audre Lorde cautioned that the master's house will never be taken down with the master's tools.<sup>1</sup> Her insight has new poignancy in the Anthropocene where the tools of mastery—over people, plants, microbes, and molecules—have devastated agricultural soils. What conceptual tools can take down the logics and rationales of the Anthropocene's mastery over nature—in respect of agricultural soils?

The papers in this special section edited by Anna Krzywoszynska and Greta Marchesi speak powerfully to the emergence of a new chapter in Environmental Humanities: a weaving together of sciences, social sciences, relationality, materiality, and multispecies relations in a manner that surfaces partnership-based processes rather than object-based mastery. The struggle they exemplify is what Isabelle Stengers would call a cosmopolitical struggle—a struggle over what is rational, reasonable, normal, everyday common sense.<sup>2</sup> For reclaiming terra—soil and earthly relations—requires struggles over forms of science that have been captured by economic, political, and legal practices that have situated in the web of soil life, the logics of private property, ownership, and control.

What is it to work toward a science of partnerships in processes instead of mastery? Greta Marchesi speaks eloquently of Liebig's attempt to turn soil richness into purchasable molecular labor to free laborers.<sup>3</sup> The irony! Chemical soil additives, added to soil in the belief that plants were like molecular machines, could not take down the Master's House: on the contrary, they made it possible for the Master to master an ever larger estate. Anna Krzywoszynska addresses the green version of the molecular labor argument, in which contemporary “agro-sciences are casting soil organisms in the role

1. Lorde, “The Master's Tools,” 1984.

2. Stengers, *In Catastrophic Times*, 2015.

3. Greta Marchesi, “Justus von Liebig Makes the World: Soil Properties and Social Change in the Nineteenth Century,” in this issue.

of agricultural laborers.”<sup>4</sup> Changing the mode of agricultural labor from tractors and chemicals to soil biota, she argues, is “likely to reproduce and may reinforce the existing dynamics of domination and exploitation of environments” in which “the natural world is not just commodified, but reorganized in the service of capital accumulation. Transforming ecologies so that current dynamics of capital reproduction can be upheld . . . ‘invokes the logic of subsumption on a planetary scale.’” Yet she reminds that “soil biota [are] powerful and unknown agents of planetary change. . . . Every time we change soils, we change everything else.” Humility is necessary to the partnership with humus.

Focusing on the creation of new fields of scholarship on urban soils, Germaine Meulemans reflects that “in the current period, soils are becoming the very object of engineering, rather than something which just underpins it. . . . Seeing soils in terms of the ecological benefits they bring to humans continue modernist dreams of improving nature to serve human needs. . . . The new trope of developing and merchandizing ‘ecosystem services’ is a daring candidate for defining the new mode in which urban pedogenesis will exist in the future.”<sup>5</sup> An alternative surfaces in Anne O’Brien’s sensitive handling of the soil as a relational matrix: “As farmers gain a better grasp of soil integrity, and as it is also revealed as contingent, new dimensions of soil flourishing become evident, and the distress of soil ecosystems is rendered ethically acknowledgeable.”<sup>6</sup>

A relational approach to soils, these articles propose, would not cast soil molecules and microbes as objects, because the task of negating the Anthropocene demands that humans become Terrans: Earth citizens who are alive to the metabolic effects of lives-as-lived. Unmaking relations of mastery over Terra, these essays suggest, begins with a soil scholarship that attends to the vital continuum of relations between humans and humus. Where a necropolitics has enacted its values via its ignorance of soil’s mycorrhiza, relations that cultivate a tenderness for the almost invisible tendrils of living organisms may effect repair on a scale unimagined, one season at a time.

The thought-work in these pieces reminds me of Kenya’s Green Belt Movement founder and Nobel Peace Prize winner Wangari Maathai, who sought to regenerate land, households, and politics in Kenya by restoring soil, tree by tree. For Wangari, the preservation of soils through tree planting responded to the patriarchal authority that local agricultural science had become. In rural Kenya, women were managing households where deforestation had degraded and dried soils and streams; farming had become tough, and men had migrated to the cities in search of jobs. Declining politely the approach of agricultural extension officers whose tree-planting advice had tried to

4. Anna Krzywoszynska, “Nonhuman Labor and the Making of Resources,” in this issue.

5. Germaine Meulemans, “Urban Pedogenesis: The Making of City Soils from Hard Surfacing to the Urban Soil Sciences,” in this issue.

6. Anne Therese O’Brien, “Ethical Acknowledgment of Soil Ecosystem Integrity amid Agricultural Production in Australia,” in this issue.

teach “the women about the gradient of the land and the entry point of the sun’s rays, the depth of the seedbed, the content of the gravel, the type of soil, and all the specialized tools and inputs needed,”<sup>7</sup> Wangari taught women to draw on their prior knowledge of how to nourish tree seedlings. Over time, by creating shade and stabilizing the soils, the trees turned back desertification—making it more possible to grow the food needed for households. And indeed, shortly before her death in 2011, the effects of the newly treed landscape were powerful enough to change the Kenyan constitution, which was revised in 2010 to guarantee a higher percentage of tree cover. What changed Kenyan soils and agriculture and politics was not the addition of either molecules or microbes but sharing the knowledge of tending the fragile relations of seedlings, soils, and water.

Collectively these articles trouble the proposal that the regeneration of soil and soil science will come via microbes instead of molecules, because food production, they propose, will come from neither molecules or microbes, nor even from a new a combination of both, but from the ways in which attentive activities bed into terra the complex relations of water, fungi, molecules, seeds, biodiversity, animals, humans and time. Reclaiming human attention to soil relationality is the humus of an ecological politics, these papers suggest. Centralizing these practices will entail political struggle over what is considered rational, reasonable, normal, and common sense. That political struggle will be one of many that are needed to unmake the relations of mastery that have forged the relations collectively known as the Anthropocene in fields and planet.

LESLEY GREEN is professor and director of Environmental Humanities South at the University of Cape Town. Her work focuses on the intersection of science studies, anthropology, philosophy, and research methods for unmaking the Anthropocene. Her most recent book on environmental sciences in South Africa, *Rock | Water | Life: Ecology and Humanities for a Decolonial South Africa*, was published in March 2020.

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7. Maathai, “Foresters Without Diplomas,” 135.