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Environmental Humanities

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Living Lexicon for the Environmental Humanities: Roots

*“Zipping up my boots, going back to my roots
To the place of my birth, back down to earth”.*

Lamont Dozier’s song¹ celebrating being “homeward bound” towards Yoruba ancestry, was released the same year as the TV adaptation of Alex Haley’s *Roots*, another story tracing African-American heritage. Metaphors of human rootedness reach way beyond and before 1977 USA, often being used to visualise diaspora.² Roots are perhaps the most familiar way to convey belonging - human connections to place.³ hooks describes regaining connection to Black history and community by returning to her Kentucky roots because for her, just as roots feed plants, place nourishes people.⁴ Histories and survival of peoples and plants are so closely intertwined,⁵ it is perhaps not surprising that we understand ourselves through botanic metaphors.⁶

Changing relationships to place are revealed through following people’s interactions with plants because flora is materially changed by spatial politics, particularly when groups enrol plants to contest belonging: trees planted in Palestine-Israel physically and metaphorically stake territorial claims.⁷ Plantscapes were ransacked by colonisation as people and plants were forcibly uprooted from their land. Re-planting significant species offers both practical and symbolic counter action, re-rooting people and plant in place.⁸ Using particular plants in particular ways - for food or craft perhaps -

¹ Although credited to Dozier, Nigerian musician Orlando Julius claims authorship of elements including the Yoruba words. See <https://www.ft.com/content/11ff54ae-6e96-11e5-aca9-d87542bf8673> .

² Long, Joanna C. "Rooting diaspora, reviving nation: Zionist landscapes of Palestine–Israel." *Transactions of the Institute of British Geographers* 34, no. 1 (2009): 61-77.

³ Malkki, Lisa. "National geographic: The rooting of peoples and the territorialization of national identity among scholars and refugees." *Cultural anthropology* 7, no. 1 (1992): 24-44.

⁴ hooks, b, *Belonging: A culture of place*. Routledge, 2009.

⁵ Head, Lesley, Jennifer Atchison, Catherine Phillips, and Kathleen Buckingham. "Vegetal politics: belonging, practices and places." *Social & Cultural Geography*, 15:8 (2014): 861-870.

⁶ Malkki, National geographic.

⁷ Long, *Rooting diaspora*.

⁸ Kimmerer, Robin Wall. *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Penguin, 2020.

can celebrate communities' place-based traditions⁹. Where such practices have waned, their rediscovery might be understood as re-rooting to "culture and Country".¹⁰ These examples should not suggest anything inevitable about how communities relate to plants or place, or that tending plants always entails positive connections to local or global ecology.¹¹ Rather, they illustrate how plants are often enrolled as people shape and understand relationships to place and other peoples.

Geographers, anthropologists and others have spent many words interrogating place-people connections, but metaphors of roots, soils and territory are perhaps so commonsense they pass under-interrogated.¹² Here I turn attention to the plant side of these metaphors because considering what roots are and do invites re-imaginings of human rootedness. I show that dismissing roots as inappropriate metaphor for human relationships to place is founded in misunderstandings or ignorance of plants and their roots. By attending to the nature of plant roots it becomes clear they can symbolise multiple complex modes of human-place relationships.

Rootedness was typically interpreted as fixed connection to a single location to the exclusion of others,¹³ associated with phenomenological understandings of place as source of human security and stability.¹⁴ For geographer Doreen Massey, being rooted like this is "too little open to the externally relational," implying places and belonging barely change.¹⁵ In contrast, relational versions of place like Massey's render it fluid and open, not associated with one neatly bound 'authentic' community. Such places are seemingly not easily attached to through root-like connections. Malkki argued that botanical language falsely naturalises links between people and place, celebrating a territorial rootedness which is neither inevitable nor desirable in a world of

⁹ Country, Bawaka, Sarah Wright, Sandie Suchet-Pearson, Kate Lloyd, Laklak Burarrwanga, Ritjilili Ganambarr, Merrkiyawuy Ganambarr-Stubbs, Banbapuy Ganambarr, Djawundil Maymuru, and Jill Sweeney. "Co-becoming Bawaka: Towards a relational understanding of place/space." *Progress in Human Geography* 40, no. 4 (2016): 455-475; Kimmerer, Braiding Sweetgrass.

¹⁰ Tunstall, Elizabeth Dori. "Be rooted: learning from Aboriginal dyeing and weaving." (2015).

¹¹ Pitt, Hannah. "Questioning care cultivated through connecting with more-than-human communities." *Social & Cultural Geography*, 19:2, (2018) 253-274.

¹² Malkki, National geographic.

¹³ Gustafson, Per. "Roots and routes: Exploring the relationship between place attachment and mobility." *Environment and Behavior* 33, no. 5 (2001): 667-686.

¹⁴ Anderson, Jon, and Kathryn Erskine. "Trophophilia: A study of people, place and lifestyle travel." *Mobilities* 9, no. 1 (2014): 130-145; Gibas, Petr. "Between roots and rhizomes: Towards a post-phenomenology of home." *Transactions of the Institute of British Geographers* 44, no. 3 (2019): 602-615.

¹⁵ Massey, Doreen. *For space*. Sage, 2005, 183

displacement and mobility.¹⁶ Refugees she researched in Tanzania had more fluid, multiple understandings of spatial identity than typically conveyed by rootedness or authentic cultural roots.

Even in a highly mobile world, places matter; people can belong to somewhere dynamic.¹⁷ Alternative metaphors have therefore been sought, suiting more mobile, partial and overlapping place attachments.¹⁸ With serendipitous homophony, routes convey a sense of belonging complementary to and contrasting that of roots; bonds lived in motion or across distance, befitting cosmopolitan lives of mixed communities and complex identities.¹⁹ Refugee and migrant populations demonstrate belonging as an achievement or process shaped through practice rather than inevitably inherited.²⁰ This more dynamic kind of place relation has been described as rhizomatic, conveying home-making as a process of territorialisation open to change and transplantation.²¹ I have neither space nor will to delve into why Deleuze and Guattari celebrated rhizomes over roots, but suggest they neglected parallels between the two, perhaps demonstrating lack of curiosity about plants.²² In the plant world both travel laterally, groping beneath the surface towards nutrients. Rhizomes can generate roots, both can be the source of new plants, either can anchor a plant in place. They in fact share many of the qualities celebrated in rhizomes.

Newer metaphors for human-place relationships have been sought to convey characteristics of motion, dynamism and multiplicity, in the assumption that rooted plants cannot represent these. This misconstrues plant rootedness in two ways: firstly how plants relate to place, secondly how roots themselves live. Rootedness is typically taken to convey fixity, hence enduring connections to just one place which lend stability to human life.²³ For plants this is not how it is: “even as they are rooted, plants move”.²⁴ Pea-plant tendrils reach out in search of support then twirl around it;

¹⁶ Malkki, National geographic.

¹⁷ Country et al, Co-becoming.

¹⁸ Tomaney, John. "Region and place II: Belonging." *Progress in Human Geography* 39, no. 4 (2015): 507-516.

¹⁹ Gustafson, Per. "Roots and routes: Exploring the relationship between place attachment and mobility." *Environment and Behavior* 33, no. 5 (2001): 667-686.

²⁰ Raffaetà, Roberta, and Cameron Duff. "Putting Belonging into Place: Place Experience and Sense of Belonging among Ecuadorian Migrants in an Italian Alpine Region." *City & Society* 25, no. 3 (2013): 328-347.

²¹ Gibas, Petr. "Between roots and rhizomes: Towards a post-phenomenology of home." *Transactions of the Institute of British Geographers* 44, no. 3 (2019): 602-615.

²² Gibson and Gagliano, Feminist plant.

²³ Tomaney, Region and place.

²⁴ Head, Lesley, Jennifer Atchison, and Catherine Phillips. "The distinctive capacities of plants: re-thinking difference via invasive species." *Transactions of the Institute of British Geographers* 40, no. 3 (2015), 403.

seedlings rotate on their axis through the daily cycle; pollen and seeds are flung or carried far from the plant-parent; Egyptian walking onions perambulate. Roots themselves move, growing through the soil towards water and nutrients.²⁵ For plants, rootedness does not equal immobility because they have diverse ways to move and thrive.²⁶ Human chauvinism has blinded us to planty forms of motion.²⁷ By knowing plants on their own terms,²⁸ we see they are more like humans than traditionally thought.²⁹ If plants are sessile yet mobile then rooted humans also move, change and connect to many places simultaneously.

The second reimagining of rootedness comes through examining the characteristics and functions of plant roots. Roots are plants' lower parts, usually but not always underground,³⁰ serving functions of anchoring, absorbing nutrients and producing hormones.³¹ Beyond this comes huge diversity, with roots specialising in different functions to enable division of labour between, for example, carbohydrate storage and reproduction.³² Some roots are temporary, others permanent; a single plant can have millions of root tips.³³ Anyone who has weeded a garden will know root systems vary hugely:

“Some roots spread horizontally in the topsoil, others grow downward 30m or more. Certain plants have much more root mass than shoot mass, whereas some large globular cacti have only a few scrawny, threadlike roots.”³⁴

If plants are rooted in multiple ways, rootedness encapsulates diversity of depth, extent, function and form befitting complex human belonging.

Students instructed by Kimmerer to gather spruce roots for basket making will also tell you that - contra Gibas - rootedness does not mean being bounded or self-contained. They follow spruce roots across the forest floor, uncovering map like systems of different plant roots criss-crossing and connecting, traversing rotten logs, spreading considerable distances.³⁵ This sharing of physical

²⁵ Fogg, Gordon Elliott. *The growth of plants*. Penguin Books, 1970, 77

²⁶ Gibson and Gagliano, *Feminist Plant*.

²⁷ Hall, *Plants as persons*; Gibson, Prudence, Gagliano, Monica. “The Feminist Plant: Changing Relations with the Water Lily.” *Ethics and the Environment* (2017) 22(2):125

²⁸ Myers, Natasha. “Photosynthesis. Theorizing the Contemporary.” *Cultural Anthropology* (2016).

²⁹ Head et al., *Vegetal politics*.

³⁰ Allaby, Michael, ed. *A dictionary of plant sciences Fourth Edition*. Oxford University Press, 2019.

³¹ Mauseth, James D. *Botany: an introduction to plant biology*. Jones & Bartlett Publishers, 2019.

³² Mauseth, *Botany*.

³³ Mancuso, Stefano, and Alessandra Viola. *Brilliant green: the surprising history and science of plant intelligence*. Island Press, 2015.

³⁴ Mauseth, *Botany*, 226

³⁵ Kimmerer, *Braiding Sweetgrass*, 235

space involves complex relationships between organisms, including the well-known symbiosis with microbes which stimulate root nodule formation, enabling plants to fix nitrogen.³⁶ By forging through the ground roots make space for air to circulate, creating the conditions for other organisms to thrive.³⁷ This is also the zone of communication between plants and to other organisms: roots exude hormones and other compounds which signal presence of a threat or nutrient.³⁸ These induce useful responses to defend against attack or grow away from competitors, hence the root system is characterised as the centre of the plant nervous system or intelligence.³⁹ These responses are highly complex as each root tip must act in light of numerous others, and of the plant's overall needs - a form of distributed intelligence.⁴⁰ Rootedness enables communication and cooperation, allowing plants to thrive amongst their neighbours whilst shaping the environment.

To understand roots, let's follow Natasha Myers' suggestion to feel like a plant:

“Now drop down into your roots. Extend yourself into the cool, moist earth.

Feel your strength as a downward thrust that inspires an upward lift...

Find one of your root tips. Taste the wet, metallic soil...

Propel yourself towards the source...

Push yourself up against the soil; grow through minute crevices between crumbling pieces of earth...

Now multiply this sensation...

You have become one giant nerve cell merging with soil...

Feel the energetic thrill of connection. How far can you extend your awareness? Run with it, in every direction.”⁴¹

So roots are active and vital, far from simple, not natural opposites to either routes or rhizomes. Rooty metaphors informed by knowledge of plant worlds suit spatial relationships of diaspora, multiple homelands or none. If we want to draw on roots' being for metaphors of human relationships to place there are many threads to follow: nourishment, symbiosis, communication, co-emergence. Roots need not be what we go 'back to', or convey reactionary forms of belonging which favour past times and places with one 'authentic' spatial identity. Plant roots suggest potential to move forward and become. Roots are in motion and move others so being rooted does

³⁶ Hall, Matthew. *Plants as persons: A philosophical botany*. Suny Press, 2011, 151

³⁷ Kimmerer, Braiding Sweetgrass 268-77)

³⁸ Hall, *Plants as persons*

³⁹ Hall, *Plants as persons*; Mancuso and Viola, *Brilliant Green*

⁴⁰ Mancuso and Viola, *Brilliant Green*

⁴¹ Myers, Natasha. "A Kriya for Cultivating Your Inner Plant." *Imaginings Series*, Centre for Imaginative Ethnography, Toronto, Canada (2014).

not mean binding to the spot, more a dynamic relationship to place, reaching towards others and moving together in continual exchanges. Beyond suggesting more diverse and accurate metaphors for human belonging, learning from plants shows how we might use rootedness to nourish care for the world.⁴² A more vegetal perspective shows how plant roots enable co-emergence within multi-species communities where each depends on, so must care for others.⁴³ So in pursuit of care, we go *forwards* to our roots.

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