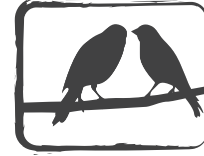

"It's Only Really When I Put My Hands in the Soil That I Feel at Home"

Soil Care and Ecological Belonging in Urban Growing Practices

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Abstract This article explores how practices of soil care in urban gardening contribute to a sense of ecological belonging. Human–soil belonging can be invoked with vastly opposed cultural material underpinnings and sociopolitical implications. Starting from complex fractured understandings of belonging as always intrinsically unbelonging, and based on interviews and fieldwork among diverse communities of committed urban growers from uprooted and migrant backgrounds in a city of the British East Midlands, the article looks at how material, affective, and ethical relations in soil care may offer a distinct opening to more-than-human relations of belonging to/with land. Growers repair and nourish soil guided by complex obligations toward a range of socioecological processes and creatures, connect to pasts and futures of urban land, and navigate affective and ethical ambivalences in ways that reconfigure place, identity, and more-than-human community. Attention to these experiences both troubles and reclaims ways of belonging ecologically at the heart of diverse, composite, and uneven worlds.

Keywords: soil, belonging, care, ecological cultures

This article explores how soil care in urban growing practices may contribute to a sense of "ecological belonging." We focus on soils—the living matter of the land. Land and soil are not interchangeable notions, even if often similarly invoked to denote a sense of place-based relations. We embrace this ambiguity while adopting an idea of soil that goes beyond this overlap, in tune with contemporary soil-centered practices and narratives that have increased awareness among practitioners and in popular culture of soils as worlds of living materiality that play vital ecological roles. Such approaches characterize soils as more-than-human worlds with intrinsic ethical significance, while making widespread use of scientific narratives that conceive of soils as biological and

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ecological realms.[1] Our research explores whether this recognition of soil's ecological materiality in contemporary human–soil relations may offer distinct opportunities for reconceptualizing relations of belonging to/with land.[2]

We focus on material, affective, and ethical dimensions of soil care in contemporary urban Britain. Our observations are grounded in Leicester, where we live, a city in the East Midlands of the UK known for its rich ethnic diversity but significant wealth disparities.[3] Our interest in human–soil belonging in this context grew from participating in urban growers' networks where improving and caring for soils was often discussed as a practical personal action to "reconnect to the land" and address the climate and ecological crisis. We became interested in what this reconnecting may imply for growers who, like us, were mostly new immigrants to Leicester, working in urban plots distant from traditional and rural connotations of belonging to land and soil. We conducted interviews and fieldwork to explore whether, and in what ways, caring for a patch of urban soil could foster this sense of reconnection akin to belonging to the land. Our research surfaced human–soil relations that weave together the pasts and futures of urban growing spaces and navigate affective and ethical ambivalences around place, identity, and more-than-human community—in ways that both trouble and reclaim notions of belonging and commitment to ecological care.

In what follows, we first present our angle of inquiry and conceptual grounds in a contested notion of belonging, the focus on soil care, and our research approach. We then discuss the implications of themes emerging from the research for contemporary ecological belonging.

Un/Belonging, with/to Soils

Soil conveys a long-standing association with sentiments of belonging. More than a metaphor, this link is rooted in dependency on soils for sustenance. Situated soils can become abstracted, too, as cultural emblems of human attachment to place, land, territory, and nation. Such connections also invoke exclusionary narratives engraining place with imaginaries of nativist and racialized lineages and kinships—from the violence of "Blood and Soil" Nazism to technocratic nationalisms and other contemporary expressions of nationalism and xenophobia globally, including American white supremacist Return to the Land movements.[4] Yet soils, as material repositories of memory, ancestry, and kinship with land, can also invoke emancipatory and resistance struggles, as

1. Puig de la Bellacasa, *Matters of Care*; "Reanimating Soils."

2. This rising interest in soils is evident across public cultural spaces through a wealth of popular scientific books, documentaries, art exhibitions, and articles in the mainstream press and through the intensification of policy initiatives dedicated to protecting soils.

3. According to official statistics, 35 percent of Leicester's population were born outside the UK, while 55 percent were from a non-white British background (2016). Leicester ranks among the 10 percent most deprived local authorities in England. "English Indices of Deprivation 2019," Ministry of Housing, Communities, and Local Government, September 26, 2019, https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019.

4. Fitzpatrick et al., "Governing the Soil"; Gerhard, "Change in the European Countryside"; Sommerlad, "Far-Right Group"; Van Sant, "Long-Time Requirements"; Munster, "Performing Alternative Agriculture."

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articulated in the theory and nature writing of Indigenous, Black, and other writers of color.[5] Human–soil belongings thus hold vastly opposed cultural material underpinnings and sociopolitical implications.

In British postindustrial society, disrupted and nonlinear relationships with place, kinship, and lineage are the norm. Yet, also here, we hear calls for exclusionary attachments to land reflected in the polarization surrounding Brexit and the broader rise of nationalist and racist anti-immigrant sentiment across Europe.[6] This includes the rise of agrarian populism, which appeals to a romanticized sense of belonging threatened by newcomers or others and fuels perceptions of an urban-rural divide. Nonetheless, this is also a Britain where belonging has long been redefined as a hybrid, composite experience.

Cultural studies scholars, notably British Jamaican-born Stuart Hall, challenged traditional theories of rootedness in space, time, lineage, and kinship.[7] Although Hall's work emerged from the generative tensions within Caribbean Blackness, both the collective rediscovery of a shared historical experience and the ruptures and discontinuities born of traumatic colonization, his approach nonetheless resonates with the complexity of contemporary lives in Britain and beyond. This underscores how migration, displacement, and diaspora generate shared yet unevenly shaped experiences of belonging and unbelonging, structured by race and other axes of exclusion and privilege, that ultimately unsettle the very notion of belonging.[8] Insights from Black feminist and Chicana theory further illustrate that contemporary migration, mobility, and transnational lifestyles challenge static ways of life, redefine home, and weaken attachments to place.[9] We also note how belonging and unbelonging are co-implicated: belonging is always excluding-from, alienating as much as attachment-forming, not only because when some belong others can be made to not belong but because belonging, understood here as a contingent, radically open-ended condition, thus remains forever an unfinished longing. Considering this intrinsic and generative unsettledness, we approach belonging here as always also unbelonging. Belonging nevertheless remains a fundamental geographical, sociological, and anthropological concept to understand social and cultural attachments to place, community, and identity.[10] We therefore embrace complex, plural, composite, and intersectional experiences of belonging while seeking to understand how these experiences may contribute to rethinking ecological practices and narratives.

Our ethnographic research focuses on urban growing practices. We draw on several strands of scholarship: studies of identity and belonging through urban food-growing

5. César, "Meteorisations"; Ferdinand, *Decolonial Ecology*; Gilio-Whitaker, *As Long as Grass Grows*; Lanham, *Home Place*; Millner, "Experiments In Situ."

6. Valluvan, *Clamour of Nationalism*.

7. Hall, "Culture, Community, Nation"; "Cultural Identity and Diaspora."

8. McKittrick, *Demonic Grounds*.

9. Anzaldúa, *Borderlands*; Appadurai, *Modernity at Large*; Massey, "Global Sense of Place."

10. hooks, *Belonging*; Yuval-Davis, *Politics of Belonging*; Mee and Wright, "Why Belonging?"

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practices; cultural geography's framing of landscapes as both expressions of cultural meaning and sites of embodied, affective experience; and the practice turn in contemporary theory, which understands practices as mediating forces that enact and reconfigure worlds, knitting place and experience together through sustained, embodied engagement.[11] We further draw on literature that seeks to reimagine belonging with an environmental humanities lens to draw attention to the contested spaces of biocultural relationships and to trouble the boundaries of a human species with a righteous place.[12]

Engaging with the concept of belonging at a geopolitical moment when exclusionary notions of identity and place are resurgent requires a conscious resistance to inward-looking, defensive understandings that seek to fix or purify belonging. This inquiry contributes to that effort by examining how urban growers' everyday practices of soil care may foster a sense of belonging that is open, relational, affective, and co-constituted with the more-than-human world; an experience of belonging that is always in the making. This enquiry also recognizes that ecological belonging must be situated within a reckoning with, and reclaiming of, the disrupted and entangled histories of human and more-than-human displacement, in order to acknowledge how ecological and social ruptures, often violent and unequal, have shaped the world we inhabit.[13]

More-than-Human Soil Care

Our research is grounded in the renewed interest in soils that has flourished over the past fifteen years and that has generated fresh approaches in social and cultural theory.[14] Central here is a shift from viewing soil merely as a physico-chemical resource to be harnessed for its ecosystem functions and services, to recognizing soil as a multispecies living world—a more-than-human community with intrinsic value.[15] While not new to soil practitioners, the concept of living soil has gained traction among humanities and social science researchers who are seeking to radically reimagine human-nonhuman relations drawn by a sense of wonder at soil's "creative, irreducible power that forces things, affect, and relations into being."[16] In these perspectives, soils are nature-cultural media, ecological, geological, biological, social, and cultural entities, entangling diverse human actors with a more-than-human community. They not only sustain life but also

11. Bhatti and Church, "Cultivating Natures"; Bhatti et al., "I Love Being in the Garden"; Ginn, "Death, Absence, and Afterlife"; Ginn, "Sticky Lives"; Pitt, "Questioning Care"; Gerodetti and Foster, "Growing Foods from Home"; Gerodetti and Foster, "Migrant Gardeners"; Tolia-Kelly, *Landscape, Race, and Memory*; Pitcher, "Belonging to a Different Landscape"; Massey, "Global Sense of Place"; Schatzki et al., *Practice Turn in Contemporary Theory*; Ingold, *Perception of the Environment*.

12. O'Gorman, "Belonging"; Plumwood, "Shadow Places"; Multispecies Editing Collective, *Troubling Species*; Wright, "More-than-Human, Emergent Belongings."

13. Ferdinand, *Decolonial Ecology*.

14. Salazar et al., *Thinking with Soils.*

15. Puig de la Bellacasa, "Re-Animating Soils"; Krzywoszynska and Marchesi, "Toward a Relational Materiality."

16. Tironi et al., "Soil Theories."

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imbue the practices of soil care with meaning for those who engage with them.[17] Our approach to the sociocultural imaginaries of human–soil belonging, grounded in the materialities and everyday practices of growers' soil care, builds on our previous research conceptualizing care as three-dimensional, encompassing the practical work of soil repair and maintenance; affective, sensuous, and aesthetic connections; and ethico-political commitments to more-than-human flourishing.[18]

Place can offer a fruitful grounding for cultivating sustainable socioecological soil knowledges.[19] Our research acknowledges this, although shifts the focus to what may be learned about human–soil relations where humans (and soils) are dislocated from stable place-based belonging. Given their backgrounds, our growers were less concerned with the place where they happened to be gardening than their "place in the family of things," as one grower put it.[20]

Researching with Soil-Stained Fingers

During the 2021 growing season, we conducted immersive fieldwork with each of our growers, carrying out two-hour visits to their individual growing spaces, including community gardens, allotment sites, private gardens, a community farm and a commercial biointensive garden. We selected twenty-two growers living in Leicester from diverse cultural, political, and faith backgrounds all committed to organic and soil-centered growing techniques. This included twelve women and ten men (aged thirty to seventy-five) all born outside Leicester—eight were first- or second-generation immigrants from India, Malawi, and Italy; one was a recent refugee from Zimbabwe; and the rest were born elsewhere in the UK. Our interviews followed a Show Me Your Garden method, a mobile in situ tour of the growing space that included gardening alongside our growers and being guided through gardening tasks. Growers shared thoughts as they performed these embodied and habitual practices. We focused on paying attention and developing rapport, allowing place and practices to guide conversations. Our fieldwork approach and theoretical framework can be described as soil care doings, involving turning compost, weeding, planting, and observing soils together.

Conversations initially focused on material aspects of growing and flowed into experiences and techniques learned in different times and places, which led into ethical and affective relationships with place, the soil, and nonhumans. With growers we reflected on what it may mean to decenter human perspectives in growing and consider belonging from the perspective of relationship with soil microbial life, edible plants and weeds, and garden fauna, as well as found items and rubbish. What emerged was a thick notion of soil–human relations in stories expressing the affective cocreation that happens

17. Krzywoszynska, "Caring for Soil Life."
18. Tronto, *Moral Boundaries*; Puig de la Bellacasa, *Matters of Care*.
19. Krzywoszynska et al., "To Know, to Dwell, to Care."
20. Oliver, "Wild Geese."

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in gardening.[21] In often moving and sensitive conversations, we refrained from probing when participants did not offer responses voluntarily. Several growers expressed gratitude at being able to articulate ideas and feelings about belonging and identity, with one remarking that our meeting "felt like a therapy session." We wondered whether the affective qualities of the garden and soil, combined with our gentle fieldwork approach, allowed for such openhearted responses. To honor this intimate sharing, we pseudonymize growers and growing spaces.

By amplifying the voices of gardeners in our ethnographic study, we show how gardens operate as patches of livability, meaning, and agency, and offer one way of engaging with today's ecological troubles.[22] In a modest way, we see this work as an extension of our own commitment to soil care; typing these stories "with soil-stained fingers" both in the material sense and through paying attention to practices of ecological care and repair amid human-induced environmental devastation.[23]

The Unsettled Space and Time of Urban Soil Care

Growing space in the city of Leicester is scarce, and this scarcity is compounded by insecure tenure and access, as well as geographic and social stratification, all of which reflect broader systemic inequalities in land and housing across England.[24] Some of the growers interviewed had privately owned gardens and allotments, and others worked for community growing projects, but most had tenuous relationships with their growing spaces: renting, subletting, or gardening on patches of soil reclaimed under backyard paving stones. In 2021, one grower explained there was a waiting list of over 1,030 people for Leicester Council allotments.

Jane had been on an allotment waiting list for almost a year, keen to retire and start gardening seriously, until she was offered a very overgrown plot. She soon realized the scale of the challenge: "When I first saw the plot, it was diabolical. They said it hadn't been cultivated for two to three years, but I'd say ten. . . . It had thick brambles all over. We found . . . broken bikes, an outboard motor . . . , and about thirty bags of partially decomposing household rubbish that we dug out of the soil and in fact we are still finding." The parlous state of urban soils is a common theme in our conversations, echoing research in urban gardening more generally.[25] Reclaiming urban soils is a slow, mundane process of sifting, hauling and barrowing out refuse, cutting back persistent weeds, and sometimes bioremediation to remove pollutants. Urban growers seeking to reconnect with land in contemporary industrial societies engage in a materially situated form of soil care taking place amid the inheritance of degraded and polluted soils. This

21. Rose et al., "Thinking Through the Environment"; Guibert, "On the Usefulness of Modern Animism"; Van Dooren and Rose, "Lively Ethnography."

22. Di Paola, *Ethics and Politics*.

23. Hamilton and Neimanis, "Composting Feminisms," 524.

24. Land Justice Network website, https://www.landjustice.uk (accessed July 30, 2022).

25. Cahn et al., *Terres des villes*.

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fundamental work of repair and maintenance lies at the heart of practices of care and ecological reparation that more-than-social movements engage with when transforming life's material conditions.[26]

The condition of soils is shaped not only by place and parent material but also by human and nonhuman practices. Any notion of soils as static or inherently tied to a particular location begins to unravel when we consider the intensive labor involved in transforming them—for better or worse. Krzywoszynska and Marchesi describe soil's "relational materiality" to articulate an ontological understanding of "soils as dynamic ecologies in the becoming of which human beings are implicated, with whom they are shaped, and on which they depend."[27] For urban gardeners this is a practical matter, manifesting in their encounter with soils and ongoing maintenance. Urban soils are often regarded as functionally degraded. Yet research has shown that the soils of Leicester's allotments and gardens contain levels of soil organic carbon and other indicators of soil health comparable to those found in seminatural ecosystems, and significantly higher than in surrounding agricultural land. The same studies also found that nearly all surveyed growers composted biomass on-site, with the majority additionally applying manure and fertilizers.[28]

Urban soils are inherently anthropogenic, mixed with organic and inorganic materials drawn from an array of local and distant sources. Our growers described how a single growing space might contain composted food scraps from global supermarket supply chains, garden waste from municipal composting sites, manure from racehorse stables and livestock farms, alongside inorganic materials such as sand, rubble, peat, and vermiculite originating from construction sites, peatlands, and mines.[29] These materials and nutrients may be gifted or exchanged through neighborly reciprocity—yet they may also trace connections to what Australian theorist Val Plumwood calls "shadow places"—sites that sustain other places through exploitative, extractive, and often colonial relations underpinning the global economy and culture.[30] Attending to the shadow places and the complex circulations of matter, labor, and value implicated in sourcing soil enrichment inputs further problematizes the idea of an unmediated, original, or innocent affective sense of belonging to land and place.

The very materiality of urban soils and practices of urban soil care unsettles a sense of belonging not only in place but also in time.[31] Time in urban soils unfolds across multiple scales: from geological and ecological timescales to the annual rhythms of planting, harvest, repair, and maintenance, as well as the lived temporalities of growers

26. Denis and Pontille, "Material Ordering"; Spelman, *Repair*; Papadopoulos, *Experimental Practice*; Papadopoulos et al., *Ecological Reparation*.

27. Krzywoszynska and Marchesi, "Toward a Relational Materiality," 194.

28. Edmondson et al., "Urban Cultivation in Allotments."

29. Engel-Di Mauro and Van Sant, "Soils and Commodification."

30. Plumwood, "Shadow Places," 139.

31. Bastian, "Time and Community."

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themselves. The garden anchors these modes of time in the "now."[32] Tending soils meant for growers engaging with layers of pasts and a constant turnover of disconnected occupants—human and more-than-human, biotic and abiotic. Besides local records and the memories of community elders, soils hold a prosaic imprint of before. Artifacts discovered while reclaiming soils can be unwelcome, seen as out of place because they haven't decomposed, especially plastic. Contaminated soil especially may disrupt attempts of connection. Jane recalls that her community garden committee was advised not to test soil toxicity levels—the site had previously been a garage and a dog park—fearing the council would shut down the garden, and so vegetables are all grown in raised beds. She quietly admits, "I still wouldn't eat anything grown here."

However, finding artifacts not considered to belong in a soil can also unexpectedly offer a sense of belonging. Sasha explained how, working through brambles, she uncovered the life of the previous owner—his metal plumber's sign with a local address, a shed full of wood, tiles, several ladders, and dozens of metal containers. She reused wood for construction, containers for planters, salvaged beautiful Edwardian tiles—assuming her plot-ancestor removed them from a bathroom but could not bear to throw them away. A small wooden boat was now a magnificent raised bed. Discussing objects found while digging, another gardener admitted he keeps a box full of the marbles, clay pipes, and toy cars he has dug up. Sasha laughs and goes to her shed, bringing back a box of old-fashioned electric plugs to show him. Gently wiping the soil from them, she asks, "Why can't I throw these away?"

While all growers expressed ambivalent relations with their plot and Leicester more generally, traces of those who cared for these soils previously somehow recreate an ancestral connection of sorts. "Found" artifacts take on their own story of discovery, disposal, repurposing, or even reverence. Yet evidence of ancestor gardeners simultaneously unsettles traditional place belonging, emphasizing the present practice of reclaiming soil as a doing generating belonging. As most of our growers were newcomers to Leicester, it would be tempting to see these stories as a deliberate attempt to cultivate a sense of belonging to a place by caring for it into the future.[33] It became apparent, however, that building long-term relationships with a plot was not a significant motivation. Most had cleared and gardened across the city to then move on, by choice or circumstance. Gareth explained his feelings about having to leave the land where he had established a successful commercial biointensive garden: "Yes, there is sadness, but it's also seasonal. If I need to grow and move on, that's what I need to do. It's where I'm going—I've learned this from my years of traveling around."

Allotment holders' experiences further reveal urban soils as unsettling places. Alongside talk of warm and generous neighbors, growers mentioned toxic management cultures, unwanted advice, unwanted sexual attention, rumormongering, and pesticide

32. Bhatti et al., "I Love Being in the Garden."

33. Bennett, "Gifted Places."

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drift. John, an African refugee, had his allotment shed burned down and was grateful to be offered a different plot on another site. Charlie won the Leicester Allotment of the Year prize for his plot but was soon forced to move to another site due to conflict. These stories reveal how urban gardening includes a diversity of experiences ranging from collective practices of resistance to othering and racism.[34] Similarly, community workers express frustration at the challenges of establishing and sustaining community gardens, emphasizing that these spaces are not always benign or inherently nurturing of community care for more-than-humans.[35] Leila describes efforts to reclaim an overgrown inner-city pocket park: "The idea is to make this a local community garden. . . . But local people don't see the need. They [tell] me, 'You are wasting your time'. They see it as messy and straggly. There is a huge trend in my Gujarati community to pave things over and chop things down."

Given the scarcity of urban gardening space and the degraded condition of urban soils, growers understood that they would need to clear rubbish from the land regardless of whether they had long-term security or not. This seeming paradox between willingness to do the hard material labor to make a site cultivatable, on the one hand, and pragmatism about the specific site, on the other hand, may give a wider indication of how grower communities relate to urban space: it is the active process of care and growing that matters more than connecting to place. Reconnecting to land in unsettled urban spaces thus brings an intense focus on the "now" of gardening. And what remains of the places where they no longer garden are affectively charged memories of the first worm, the first robin, the first broad beans, the first homegrown meal, and the physical mementoes—the strange, excavated objects and the scars from hacking back the brambles.

The Affective Ambivalences of Soil Care

All growers described placing their hands in the soil as a revelatory, life-changing experience, as well as a metaphorical expression describing how content and grounded they felt tending their soils. They alluded to a specific affective connection they experienced when they were physically engaging with the soil barehanded: "Although the place is still full of glass and I'm supposed to wear gloves, I find that I am just distancing myself from the soil. So, I end up removing my gloves. I love my soils so much" (John). Gardening barehanded allows better precision in pulling weeds but also a haptic way of knowing inseparable from sensuous care: "You really need to put your hands into [the soil] to become emotionally in touch with what is going on with it" (Sally). Laura gives a good example of this way of knowing when she explains, "I put my hands in the compost yesterday. . . . I knew my soil was good, with plenty of organic matter in it. . . . Its feels right—I don't want to put it under a microscope or test it, I use my senses rather than

34. Gerodetti and Foster, "Migrant Gardeners"; Ginn and Ascensão, "Autonomy, Erasure, and Persistence"; White, "Sisters of the Soil."

35. Pitt, "Questioning Care."

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being scientific. You feel it and it smells nice." Some growers speculated that what gave these soil encounters their affective power was encountering biochemicals or bacteria in the soil. Others reflected philosophically: "There is something about getting your hands in the dirt. . . . It is something about being 'human'. We have evolved to be in the garden over generations. To suddenly not be doing that is a loss in our psyche" (Colin).

The doings of care are affectively charged in ambivalent ways: they signify the burden required to maintain livable conditions but also embody pleasures. This ambivalent affectivity feels particularly true for soil care in contexts such as ours, where it is not imposed labor. Seemingly mundane activities—bending, kneeling, barrowing, pulling weeds, and hard digging—make the garden an embodied "taskplace" where growers experience bodily sensations that some describe as pleasurable: getting dirty, experiencing weather, having aching limbs, but also sometimes simply being present.[36]

Links between affective soil care and ethical interactions appeared too in our conversations. Some expressed visible distress that they could not maintain the relationship with soils they desired. Paul and Carys had recently joined a community farm as growers and were disheartened by the compromises they felt forced to make due to the intensive practices of previous growers—such as the use of a rotovator and commercial compost—which conflicted with their training in no-dig and biodynamic gardening. They particularly questioned why, instead of using cow manure freely available from a neighboring dairy, the previous growers had relied on chicken pellets for fertilizer—likening it to "getting your energy from drinking a can of Coke." A lack of affective connection to these soil care practices and the soil itself clearly influenced how they felt about the project: "The soils are not really enlivened here. . . . It's a very lonely feeling to not feel that rapport" (Carys). "This soil just feels lifeless to me. . . . Takes the enjoyment out of it. . . . [It] needs lots of applications of mulch, bacteria to encourage more life and humus. It's just been worked too intensively" (Paul).

Growers also described how specific practices of caring for soil connected them to family in other times and places. As we garden together, Hinal explained how her mother taught her to fertilize an empty bed with grass clippings and her grandfather in India how to make leaf mulch. Engaging in these practices reminds her of family, invoking a different affective register to using garden center compost to fertilize beds. Similarly, Gianni, who grew up in rural Puglia, describes how using the soil care practices he learned from his grandparents ("give it a good dig and build the soil into a pyramid that the sun can penetrate") and planting seed varieties sent by his family allowed him to feel he simultaneously belonged in Leicester and with his distant family and upbringing.

Weaving kinship ties and memories through plants and growing practices reflects a sense of reconstructed connection and belonging that is "portable," generating experiences that can be reactivated in each new space.[37] Cultural geographer Divya P. Tolia-Kelly observes a similar relationship in the British Asian experience of English landscapes in

36. Ingold, *Perception of the Environment*; Bhatti et al., "I Love Being in the Garden."
37. Gerodetti and Foster, "Growing Foods from Home."

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the "imaginative transfer across time and space" generated by "material 'textures' [that] cut across nations and continents, triggering past memories of landscape and place."[38] Affective connections with a specific place are not simply substituted but may articulate triadic relationships between "past lived environments, imagined and ideal ones and present lived landscapes," evoking belonging that is simultaneously mobile, transnational, and at home.[39] Important for our argument here is that newcomers to a place draw on memories of other landscapes and textures, evoked not only by affective resonances with a present place but by practices of care evoking thereness, a vicarious sense of past belongings brought actively into a present. A material and affective palimpsest composed of messy and nonlinear layers of care.

Finally, our growers expressed affective meanings of gardening as self-care.[40] Several described their plots as a "safe space" beneficial for their mental health. Sasha explained how her father recognized how she was prone to melancholy and taught her that having something growing and depending on her would give her a reason to get up in the morning. Similarly, John poignantly shared how establishing a sense of connection with the more-than-human world on his allotment helped him counter his experience of the dehumanizing UK asylum system, after waiting seventeen years to receive refugee status: "When you come here, you grow something, you are talking to something. And tomorrow or the day after something comes out. Now you have a plant—you are talking to a plant, showing your love to a plant and it is responding to you. And that is the only thing that would answer me. Those people at the Home Office, they never answered me." These observations highlight how more-than-human relationships can foster an affective sense of belonging—a feeling of reciprocity and being cared for—particularly in contexts where individuals are disheartened by unjust and exclusionary human interactions.[41] More generally, our growers described a sense of well-being and safety arising through more-than-human care doings rather than a specific space per se.

The Decentered Ethics of Ecological Doings

For many of the growers we encountered, engaging in soil care was part of a broader commitment to ecological practice and repair—either grounded in belonging to a community shaped by shared spiritual and philosophical beliefs or ethico-political identities, or else rooted in personal values aligned with environmental care.

John, a Rastafarian, explains, "Being able to garden lets me live in my faith [in] practice and theory. . . . Like in the beginning of days, with Creation, when none had dominion over other." Gareth, a yoga teacher, has a small commercial biointensive garden committed to "serve nature and community." With the lease on his land ending, he explained that his dedication was less to a specific community but rather the principle

38. Tolia-Kelly, "Mobility/Stability," 343.

39. Tolia-Kelly, "Mobility/Stability," 354; Tolia-Kelly, *Landscape, Race, and Memory*, 79; Pitcher, "Belonging to a Different Landscape."

40. Gerodetti and Foster, "Migrant Gardeners."

41. Penniman, *Farming While Black*; Siva et al., "Land Reparations and Ecological Justice."

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of community service. John also dedicates a portion of his plot to growing plants unavailable in Leicester, such as bitter gourd, okra, and chimolia, regularly donating these to the refugee charity that supported him. Within these relationships, caring for soil was also understood by growers as a way of acting in what they consider to be a "right relationship"—not only with other humans but with the earth as a more-than-human community. As John later clarifies, "I planted a lot of chimolia so everyone can eat, including the birds. . . . It's a circle, you know and that circle has got to be respected."

To understand care as a more-than-human doing requires acknowledging the myriad interdependent agencies that make life on earth possible.[42] The sense of ecological belonging we observed in our growers' relationships with their soils was nurtured not only by lived experience, but also by a growing understanding of, and curiosity about, ecological processes, relationships, and the specific ecosystems in which they are situated.

Given our deliberate sampling process, we knew that our growers were likely to be committed to making ethico-political choices regarding soil enrichment inputs and practices. This commitment was evident in their rejection of ecologically harmful commercial products, including peat, and in their dedication to home composting and no-dig methods as means to reduce the ecological impact of food cultivation. However, our findings also surfaced two wider entangled ethical ambivalences around soil care—the challenge around decentering the human role in the soil community, and tensions between human and nonhuman needs. Paul spoke emphatically on these ambivalences: "[I read the] Bhagavad Gita and it changed my life. Now I believe there is no separateness. I feel an affinity with soil and critters. When I'm digging up and turning the soil, I feel I'm breaking a connection. . . . Veg growing is basically unnatural. We've invaded a functioning ecosystem. . . . I try not to hurt the critters—it's horrible disturbing them. If I let it, even gardening vegetables can be disturbing. There is life and death in the production of food—even vegetable growing."

All our growers recognized that, while they might exercise material "control" over soil care practices—such as clearing, creating raised beds and compost piles, and returning organic matter to the earth—they were not the sole agents shaping soil ecologies. Several even expressed a desire to engage with soil ecologies as participants rather than masters, actively reimagining their relationship with the soil and challenging anthropocentric boundaries. Jasminder, a horticulturalist coordinating a community garden, cited permaculture ethics as shaping her soil care practices including a closed loop composting system with waste from other on-site projects—worm castings, aquaponic fish waste, community kitchen scraps, and woodchips. She noted, "The soil critters, bacteria and fungi . . . all have their place and we have our place in the cycle of things. We wouldn't have our place if they weren't there. We are part of what we produce, even though nature is producing it, you feel a part of that." Laura, inspired by her human

42. Puig de la Bellacasa, *Matters of Care*.

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ecology degree and taking online Soil Food Web courses, has also created a closed-loop fertility cycle between her canal boat home and canal-side garden using only kitchen and garden waste, straw from her neighbor's rabbits, and carefully composted humanure. She nevertheless acknowledged that it is not easy to manage ambivalent desires to be part of the ecology of a place and to be in control: "It's a constant push–pull. You come through the gate, and you almost need to part the grass to get in. Then I notice how fantastic things are—I find it hard to cut back the plantain, wild rose, lemon balm, honeysuckle. . . . But then I worry the garden is untidy, and I'm not in control. . . . Then I catch myself and wonder—why do I have to be in control of it?" (Laura). These reconnections to soil are sensuous engagements that involve not only seeking to understand ecological processes but also caring for soils as part of multispecies communities with their own vitality.

Growers identified further tension in the fact that the needs of soils are not easily sense-able.[43] Sally, a permaculture teacher, explained, "There is a massive lack of confidence among new gardeners about soil care. People often ask me, 'What do I need to do to the soil? What if I get it wrong?' It's a deep, heartfelt anxiety." It could be argued, however, that it is easier to idealize ethical engagements with the "infranatural" mystery of soil life than the more challenging troubles of the visible aboveground community.[44] The contrast with treatment of weeds and creatures seen as pests makes this evident.[45] Several growers threatened violent measures against pigeons, and Ayesha, who had previously enthused about soil-creatures, explained how she lures slugs to an uncovered "sacrificial" plant and then bashes them with a mallet. She nevertheless considered this consistent with her environmental stewardship ethic in helping to maintain a balanced ecology. For her, inner-city Leicester is "out of balance," with not enough birds or hedgehogs to control the slugs: "In Islam you can't kill for no reason. I kill the slugs because they destroy my plants, my food. I wouldn't be justified if they were just nibbling a bit."

Practices of care are impure and our research highlights interspecies living as what Haraway calls "mortal relatedness," with the weighting on human actors to decide who becomes "killable."[46] Growing takes place in multispecies ecosystemic "entanglements" where the human gardener knowingly and unknowingly makes choices about the life and death of other species. Who gets to decide who belongs and doesn't in the garden? For the most part, however, growers acknowledged that while care for plants sometimes meant death, they were committed to seeking accommodation with the more-than-human: "negotiating with badgers and snowberries" (Sasha); building bug hotels, planting wildflowers, and growing sacrificial kohlrabi for cabbage whites (Abir); letting

43. Krzywoszynska, "Caring for Soil Life."
44. Puig de la Bellacasa, *Matters of Care*.
45. Ginn, "Sticky Lives"; Pitt, "Questioning Care."
46. Haraway, *When Species Meet*.

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herbs flower for insects and leaving parts of the garden untouched so mycorrhizal networks can establish (Charlie).

Several growers still sought to challenge the boundaries of this anthropocentric, "probiotic" model of care, whereby some nonhumans are enrolled into projects to satisfy the human care network while others are excluded.[47] Krzywoszynska notes that there is still scope for ethical disruption and transformation in this relational model. We observed this as growers, engaged in soil care practices, imagined a more-than-human world in which humans participated and cooperated, and made material decisions based on spiritual or philosophical frameworks explicitly seeking to embed humans within soil ecologies.[48] Biodynamic grower Jasminder exemplifies the role attentiveness can play in such a transformation, noting, "The plants actually do talk to you and tell them what they need. You just must be observant."

Recognizing that efforts to cultivate more-than-human community are embedded in complex and often noninnocent relations, our research highlights how our growers navigated the inherently ambivalent obligations of care within these unequal more-than-human entanglements. It also revealed how they are implicated in practices that complicate their own idealized visions of multispecies harmony. Through our conversations, we heard expressions and longings for "reconnection to the land" through soil care—experiences in which ecological belonging is shaped by the generative tensions of both belonging and unbelonging. These tensions offer the potential to foster nonexclusionary more-than-human relationships that resist purified or idealized forms of ecological belonging.

The Troubles of Ecological Un/Belonging

Our growers expressed complex and composite relationships with belonging. They spoke warmly of Leicester as a "tolerant" and "accepting" place but lacked strong affective ties to the city. Englishness was a difficult and contested subject—raising questions of exclusion, including from those describing themselves as "white British." These narratives were in stark contrast to how easily they spoke of their life in the garden, teeming with colorful stories about intimate relations with plants, creatures, and practices.

There was a time in Old English when to belong meant "to go along with, to properly relate to."[49] Only from the late fourteenth century do we find English definitions of *belong* as "be the property of" and "be a member of." In this article, we explored how a determination to "properly relate" through soil care practices drives ecological relations, that have little to do with property or membership. Soil care doings connect presents, pasts, and futures of more-than-human worlds from garden to planet. We argue here

47. Krzywoszynska, "Caring for Soil Life."

48. Pigott, "Hocus Pocus?"

49. *Etymonline: Online Etymology Dictionary*, "belong," https://www.etymonline.com/word/belong#etymonline_v_8290 (accessed July 30, 2025).

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that properly relating to soils cultivates a broader ethical sense of belonging—one committed to nurturing and sustaining flourishing ecological relations.

Foregrounding the material, affective, and ethico-political ambivalences of soil care can help nurture a sense of ecological belonging that cannot be reduced to the affective power of place-connection and that may still be nurtured where attachments to place are disrupted.[50] Our growers had cultivated practices to reconnect to the land that have little to do with returning to a soil to which they would purportedly belong. Moreover, attention to nuances in everyday soil care invites a search for socioecological responses to the pressing quandaries at the heart of the ongoing environmental crisis that ask radically speculative and fiercely worldly questions. For instance, when does human care for soil replicate forms of territorial nation building and colonial domination, and when does it genuinely support the soil's inherent vitality and complexity of multispecies life?

Our motivation in exploring ecological belonging echoes Ben Pitcher's call to disrupt and re-orient the affective, embodied experiences of rural English landscapes that have come to infuse nationalist sentiment.[51] Pitcher calls on us to subvert, displace, repurpose, and steal feelings of ownership and entitlement to landscape with a form of ecological citizenship providing experiences of belonging to landscape for all, while unraveling the mutually reinforcing relationship between nature and nation from within. This approach echoes Bruno Latour's later call to nurture terrestrial attachments in post-Anthropocene worlds, relying on a generalized sense of connection to Terra through specific places.[52] The conception of ecological belonging we have explored in this article resonates with these notions but differs in scale and orientation. Framing more-than-human belonging as ecological requires a departure from conventional notions of belonging to land, earth, nature, or landscape. Such concepts not only offer limited foundations for inclusive and diverse ecological imaginaries but are also increasingly unsettled by converging eco-social crises that can render familiar landscapes unrecognizable. These limitations are amplified by our attention here to practice in specific spaces—for example, fragmented urban soil plots—not easily grasped within general notions such as landscape, Terra, and traditional concepts of land. Finally, speaking of belonging as ecological connects with contemporary cross-disciplinary engagements with ecological thought and movements present in much of the research we cite.[53] It also highlights how growers' practices and knowledge are shaped by understandings of soil ecosystems and care that blend parascientific insights along with ecological commitments to care for the earth in practical and specific ways.

Our work also aligns with Sarah Wright's observation that cultural geography and the environmental humanities are increasingly interested in notions of belonging as co-

50. Antonsich, "Searching for Belonging."
51. Pitcher, "Belonging to a Different Landscape."
52. Latour, "Down to Earth."
53. Morris, "When Science Goes Feral."

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constituted by more-than-human actors and matter.[54] Echoing Indigenous relational ontologies, Wright argues that rather than acting as a background, more-than-humans—be they food, organisms, trees, stone, soil, or water—co-constitute belonging. It is important to clarify that, while our focus on more-than-human interdependencies in the contexts we studied may align with—or intentionally draw from—Indigenous understandings of belonging to land and place, our interviewees came from uprooted and migrant backgrounds and were gardening unsettled urban soils. For them, the acquired relation we call 'ecological belonging' was not inherited from tradition nor ancestry, even if cherished traditions contributed to shaping their soil care practice.

Researching empirically how urban growers develop material, affective, and ethical relationships of care with their soils, we have emphasized ecological belonging not as a preexisting sentiment that can be tapped into but as something that is made (and unmade) in everyday practices.[55] From an ecological perspective, belonging is fostering embodied and situated environmental, sociopolitical, and spiritual connections between different beings, human and not, that go beyond abstract relationalities that reproduce the vacuity of the "natural."[56] We are acutely aware of our context, one of predominantly technoscientific societies that have historically marginalized and denied Indigenous notions of belonging. In the wake of these inheritances, emphasizing ecological relationalities deliberately retains the technoscientific undertones of the notion of ecology, foregrounding how more-than-human relationalities are embedded within cultural and sociotechnical contexts that challenge the notion that anything can be neatly defined as "natural."

Finally, we join contemporary reappropriations of the ecological that promote decentering the human and confronting human exceptionalism. However, increasingly, engagements with ecology are also challenged by situated more-than-human relations and histories of social, gendered, racial, colonial, and spatial conflict.[57] In the aftermath of uneven inheritances of environmental harm—such as pollution and toxicity affecting all ecologies in various ways—there is no longer any such thing as a neutral ecology. Consequently, all ecological interventions inherently raise questions of justice that are difficult to grasp fully through a solely place-based sense of belonging. In other words, putting the emphasis on ecological relationalities today requires a noninnocent, impure approach to more-than-human relations in their specificity.

As we introduced at the start, a composite, fractured understanding of belonging diversifies attachments to land and community based on traditional connections between place, lineages, and kinship. We have attempted to both trouble and reclaim alternative hopeful human–soil imaginaries where ecological belonging arises not from the

54. Wright, "More-than-Human, Emergent Belongings."

55. Fenster, "Gender and the City."

56. Papadopoulos, "Implicated by Scale."

57. Nightingale, "Bounding Difference"; Ferdinand, *Decolonial Ecology*.

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soil, but from growing *with* and *for* soils—from doings of care that nurture belonging to a more-than-human community. The relations of ecological un/belonging explored in this article are not seeking a latent and habitual lost attachment, nor a primal or inherited connection to land, but are grounded in imperfect practices, guided by obligations toward a range of processes and creatures at the heart of ecologies themselves diverse, composite, and fragmented, marked by past and current conditions of eco-social injustice and disarray.

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