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# "You are what you eat": Plant-Human Relations in Home Gardens

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## ABSTRACT

Gardening has been conceptualized as a practice that blurs nature-human binaries and connects humans to nature in rapidly urbanising worlds. Based on fieldwork on the Cape Flats, this article explores human interpretations of beyond-human experiences that are engendered in home gardens. It interweaves ethnographic data and theoretical frameworks like posthumanism, multispecies ethnography and actor-network theory to analyse these relationships. I collaborated with six interlocutors and their gardens to reveal how companionships with plants complicate, contest or conform to nature-human binaries. Through gardening, interlocutors recognize otherwise 'invisible' elements in the natural world as valued companions that co-produce healthy vegetables and co-create identities, emotions, practices, and justices. I also trace exchanges within the garden, contending that the gardening agents that are perceived capable of maintaining beneficial reciprocities are coded as companions, whilst others that become pests or nuisances. Through these insights, I aim to add nuances to the claims that gardening dissolves human-nature dichotomies.

Keywords: Multispecies, plant-human relations, garden ethnography

## Into the Garden

"*The garden is the smallest parcel of the world and then it is the totality of the world.*"

Michel Foucault

As Val leads me into her yard, she blooms flowery smiles and sprouts anecdotes about her children of both the human and plant variety. "This here," says Val motioning to a wall of colour and leaves, "this is my home." The garden is a green goldmine of upcycled and handcrafted features, ranging from an old clothes rack used as a plant hanger to several brightly-coloured paper-mâché creatures peeping out from behind plant stalks and pots. The space radiates a sense of well-organised hybridity. An array of pots in all shapes and sizes, containing plants ranging from fennel seedlings to a pineapple's spikey head, are layered and hung at varying heights against a wall. Val hovers over her spinach plants, admiring their translucent green glow in the hazy morning light. She praises a stubby start of growth before pointing out a speckle of damage on a larger leaf. As I inspect it, I have to remind myself that this tender attentivess between her caring eye and this flourishing leaf will culminate in the snapping and stripping of harvest. "My emotions..." Val (Figure 1) says, hanging off the edge of a thought when I ask her about harvesting later, "...it's actually difficult to express the happiness and fulfilment I get when I cook with the veg that I harvested from my own garden. My babies are so important." It's my first day in the field, and I am already in awe of the incredibly strong connection between garden and gardener. Val is one of the six gardeners that agreed to let me into her agricultural world as part of a research project exploring beyond-human

Figure 1: Val and her garden. Photograph by Lauren Culverwell.

companionships. The six interlocutors—Val, Warren, Phumeza, Dorina, Rose and Norma—volunteered to be part of this study. They emerged from a pool of twenty urban gardeners that constitute part of "The Family Food Project." This practical course, which was co-founded by *Greenpop* and *Urban Harvest*, facilitates home food gardening, attempting to alleviate food insecurity and eventually foster sustainable entrepreneurship. Over the course of a year, participants learn about and engage in processes related to food gardening; ranging from earthworm farming to nutritious cooking. These lessons happen largely online and other than an initial workshop, gardeners do not interact with one another in person. These gardeners vary in age (from 30 to 72), employment status (retired to fully employed), education level (grade 9 to grade 12), gender (primarily female) and ethnicity (isiXhosa and Coloured) and location in Cape Town (Philippi to Schaapkraal). In this article I endeavour to co-theorise with my interlocutors and weave as many of their direct quotes into my writing to ensure they are "[speaking] as far as possible in

their own words" (Tilley, 2006:314). So as not to confuse these quotes with article quotes, the gardeners' words are cited without a year reference (e.g. (Val)).

Throughout my fieldwork, I drew on Burrell's (2009) conceptualisation of the field site as a network and Latour's (1990) emphasis on "site-making." Through these lenses, the research site was never a bounded, pre-given location to be found, but rather a network of "physical, virtual, and imagined spaces" (Burrell, 2009:181). I utilized a variety of methodologies to investigate these online arenas, mental landscapes and physical terrains. Given that online media is embedded in offline social spaces (Miller, 2017) and that the virtual is a valid ethnographic site (Burrell, 2009), I conducted semiformal online interviews, facilitated a prompt-guided '"WhatsApp journal", collected photos, and maintained voice note conversations. The 'mobile prompts' were particularly useful because they enabled interlocutors to document their personal points of view through their preferred creative medium (photos, videos, text, voice notes, etcetera) (Albrechtsen et al., 2017). These online methods were effective because the interlocutors were accustomed to online sharing since the majority of the program's communication, support and training happens in a Whatsapp group. Given the value of in-person research, I also conducted a series of home visits, where I interviewed interlocutors, met earthworms, smelt soils, examined plants, recorded pest damage and generally explored the inner workings of the garden. Although I was an outsider, I immersed myself in the field, albeit in a limited and constrained way, to enhance my sensitivity to the process and the interaction of gardening. Furthermore, through interviews and informal conversations, I also tracked the imaginative labour that gardeners do as they make sense of their interactions with beyond-human worlds. I divided my time equally between the gardens which were largely private, individual spaces in backyards with few external human influences or visitors.

I was drawn to beyond-human relationships because although vegetable gardens in a plethora of forms punctuate Cape Town's urban landscape, comparably little scholarly attention is given to the rich worlds of meaning ascribed to these human-beyond human assemblages. Instead, this spatial, financial, and social investment in urban food gardening in the city and in South Africa more generally is primarily researched in relation to food security. For instance, in Johannesburg, vegetables produced in domestic gardens reportedly played a significant role in reducing food insecurity (Tesfamariam et al., 2018) while in Cape Town and KwaZulu Natal it has been found that urban agriculture plays a minor role in sustaining household food security (Mfaku, 2019; Shisanya and Hendriks, 2011). This form of research encourages government programs, non-profit organisations (NGOs) and private initiatives to repeatedly cite the city's high unemployment rate and high levels of food insecurity to justify their support for agricultural ventures. For example, *Urban Harvest*, an NGO based in Cape Town, aims to address the fact that two-thirds of food-insecure households reside in cities by initiating "food garden projects that create employment and feed hundreds of people every day" (Urban Harvest, 2022, n.p.). This tapestry of local justifications is woven into global discourses of hunger and sustainability, like the United Nation's "Zero Hunger" and "Sustainable Cities and Communities" goals (UNDC, 2022). However, these types of reports and approaches seldom consider that these gardens are potentially more than centres of food production. I suggest that these debates that fixate on the links between food security and food gardening, while extremely relevant and important have potentially obscured the other forms of production within the garden space.

Furthermore, literature on home vegetable gardening frequently draws distinctions between economically marginalised individuals that garden for subsistence and financially advantaged individuals that garden for leisure or to connect with nature (Van Holstein, 2017). These approaches position subsistence gardening and leisure gardening as mutually exclusive processes and insinuate that gardens are less likely to be used to connect with nature in economically marginalised areas. While the interlocutors in this study do garden to save money and to access affordable food, reading their efforts only in this light overlooks the complex and meaningful beyond-human

relationships that grow in the space. The fact that all interlocutors in this study reported that they would continue to maintain vegetable gardens, even if their economic status drastically improved indicates that the journey of "soil to sustenance" (Sbrogna, 2018, 11) cannot be classified solely–or perhaps even primarily–as a means to "supplement household budgets" (Van Holstein, 2017, 1159). In light of this research gap, this article attempts to explore the experiences beyond food security that are engendered in home gardens, specifically the relationship that is grown between plants and their humans. This work also deliberately centres these connections—as opposed to anthropology's traditional focus on human-human social relationships—as part of a movement towards beyond-human ways of doing anthropology.

## Theoretical Roots: Growing in connection

Seth (2013) theorises that by overlooking or misinterpreting nature-human attachments, the social sciences have encouraged an artificial nature-human dichotomy. Correspondingly, Degnen (2009, 151) argues that traditional scholarship has positioned humankind and nature as separate, and regarded social relations "between the realms of humanity and nature" as impossible. However, these divisions distort intricate human-nature networks and disregard the fact that humans are materially and mentally integrated into the biosphere, simultaneously shaping it and relying on it for life (Artmann et al. 2021). Scholars have repeatedly posited that beyond-human interactions need to be taken seriously if we are to flourish not only as a human race but as part of the complex interwoven spiderweb of human and beyond-human networks that make up our systems (Heitlinger et al., 2021; Artmann et al., 2021). My research attempts to move past the human exceptionalism embedded in the social sciences (Tsing 2012; Lowe 2010, Haraway, 2008), by demonstrating how intimate and impactful beyond-human gardening companionships can be to humanness. As Tsing (2012, 141) posits, even though these networks have often been denied, "human nature is an interspecies relationship."

However, this nature-human dichotomy is not just an ideological division to be overcome through scholarly labour. As Dehaene et al. (2016) illustrate, there are multiple forces which lead to the material separation between nature and humanity. For instance, capitalism and urbanisation detach individuals from the mechanisms of nature associated with self-provision (Dehaene et al., 2016). The "metabolic rift" is a concept that captures this disruption of traditional nutrient exchanges and metabolic relations between humans and nature (Pungas, 2019). For example, because the roles of consumers and producers are largely separated under capitalism, consumers rarely feed waste back into the cycles of production, leading to soil exhaustion and a dependency on manufactured fertilisers to grow plants (Pungas, 2019). However, it is also vital to note that this metabolic rift is not experienced equally across South Africa. The country's history of land dispossession and forced relocations means that many people of colour have been moved off good quality soil and onto infertile lands (Kgari-Masondo, 2008). Although in this paper I do not directly tackle the politics behind these relocations, suffice to say that the suburbs this research landed in were designated coloured or black areas during apartheid and gardeners frequently complained about their neighbourhoods' poor soil quality. Part of what this article investigates is how gardeners push back against the metabolic rift through their garden companionships and through the practices that establish these connections. As Dehaene et al. (2016) contend, urban agriculture can be a tool to mend the metabolic rift and empower individuals to reshape their relationships to cycles of production and consumption.

I draw inspiration from posthuman and multispecies thinkers to explore these companionships. Both of these approaches simultaneously problematize and replace the nature-human binaries that have often distorted the intricate networks between humans and beyond-humans. For instance, post-humanism asserts humankind is only made possible by complex interwoven entanglements with beyond-humans (Ruzek, 2014). Similarly, multispecies ethnographies present the world as a "multicultured, [...]

multinatured, magical and emergent through the contingent relations of multiple beings and entities" (Ogden et al., 2013, 6). From these perspectives, the individual is not interpreted as singular, isolated and self-sufficient, but rather as caught up in "[webs] of interspecies dependencies" (Haraway, 2008, 11) and implicated in a "plurality of existences" (Ruzek, 2014, 6). Home gardens are a fertile space to think about beyond-human co-production and connection since the plants, soil, produce and gardeners are all implicated and embedded in complex tapestries of multispecies interactions. Once these mutual dependencies are acknowledged and accepted, it becomes possible to understand why gardeners' interactions with agricultural worlds can be interpreted as symbiotic partnerships instead of merely one-sided processes of human cultivation. As Seshia Galvin (2018, 243) contends, gardening relationships can reveal some of humankind's "deepest and most abiding entanglements with the nonhuman world."

My research is therefore framed by Latour's (2005) actor-network theory (ANT) which, in its most fundamental form, claims that 'the social' needs to be redefined to expose the intricate networks of links between actors. According to this theory, people, beyond-humans and ideas "jostle against each other," (Hitchings, 2003, 100) and interact to shape social formations. Since Latour (2005) acknowledges that ideas and nonhumans are actors, I argue that gardens can be understood as a network of human and beyond-human actors that are conditioned by human imaginings and logics. In this paper, I build on two key ideas—the theory of reciprocity and the codification of life—that I believe have shaped the gardening world as "social" (Latour, 2005). According to Falk and Fischbacher (2003, 293), reciprocity is a "powerful determinant of human behaviour" and structures humankind's approach to the world. This principle of giving and receiving can be linked to the cycles of exchange in the garden space, as gardeners trade time, emotions, energy and material resources for deep beyond-human connections and produce. These practices of mutuality and reciprocation, according to Ogden (2013), suggest that humans are not bounded or singular but rather spun into intricate beyond-human webs. The codification of life refers to the forms of classifications that gardeners employ to distinguish between 'useful' and 'non-useful' gardening agents (Chacon, 1982). As this article illustrates, only the gardening agents that have been coded as 'useful' or potentially 'useful' are accepted as companions and incorporated into the gardens' cycles of reciprocity. In other words, gardeners have constructed their own idealised version of "the social" (Latour, 2005) that excludes certain actors from companionship through a codification of life. This is not to assert that these actors gardeners deemed outside of this network contributed nothing to their garden; rather, these actors and their roles have simply not been recognised.

I also draw on Haraway's overarching theories of "species meeting" and "companion making" to frame this research. According to Haraway (2008), in the biological world, nothing produces itself; rather, everything is caught up in reciprocal interactions of 'becoming with' others. 'Companion species' is a term that encompasses all the critters that engage in these co-creations that "make us who and what we are" and complicate the boundaries of the "Great Divide between what counts as nature and as society" (Haraway, 2008, 27). 'Meeting' these companions, to Haraway, comprises more than encountering the beyond-human; after all, people encounter gardening agents like plants all the time. Rather, 'meeting' and 'companion making' involves acknowledging and knowing the beyond-human through moments of interaction, response, communication and respect. As humans acknowledge their 'companion species', they become intertwined with their identity, allowing a plurality to exist within the singular self. As Haraway (2008, 4) contends "to be one is always to become with many."

## Developing Sight: Growing Eyes and Green Children

Given that human life is impossible without botanical worlds, it is surprising that leafy beings are often portrayed as holding background roles or having loose and distant connections with humans (Seshia Galvin, 2018;

Pitt, 2016; Gibson, 2018). A plethora of studies contrast this "plant blindness" with the intimate human-plant companionships that can grow in green spaces (Seshia Galvin 2018; Alcaraz, 2019; Gibson, 2018; DelSesto, 2020; Pitt, 2016; Elton, 2021). DelSesto (2020) describes plant blindness as an adaptive brain strategy that filters out elements in individuals' lives that appear unimportant to their daily rhythms. In other words, the jacaranda tree on the corner of the street or the patchy grass growing on the sidewalk often blur into invisibility because they are not immediately relevant to lived realities of their human neighbours. However, through gardening, interlocutors reported that they "started to really see" (Val) plants. Gardeners developed what I came to think of as "green eyes" as these agricultural entities were not just seen but recognised as companions. As Haraway (2008) contends and as highlighted previously, meeting the beyond-human is more than encountering; it is recognising the intertangled production of self in conversation with others. Therefore, I conceive of visibility not only in a physical sense but as a shift from living *alongside* to living *with*. Plants went from being inconspicuous elements of the everyday to nurtured and valued entities as they grew in significance through gardening partnerships. However, this "eruption into presence" (Puig de la Bellacasa, 2014, 38) as the invisible become kin is not neutral or one-dimensional; like plants themselves, the meanings that these companionships develop have aspects that rest beneath the surface. In this article, I am interested in the kinds of meanings that germinate and flourish as plants become visible. I illustrate that these leafy lenses enable gardeners not only to become aware of plants but to also connect with them as "companions" (Haraway, 2016, 62) and as "part of [their] hearts" (Rose).

Although interlocutors do ideate their relationships with plants in different ways, the most visible imaginings were anthropomorphic and paternalistic. Interlocutors described themselves as "plant parents" (Rose), and their plants as "mummy's princesses" (Phumeza), "my family" (Dorina), "my babies" (Val), "my little ones" (Norma) or as "part of my children" (Warren). While is it tempting to interpret these metaphors as analytically insignificant because human babies and plant babies belong to separate domains (Alcaraz, 2019), Degnen (2009) and Archambault (2016) concur that dismissing the metaphors that gardeners use to describe plants glosses the complex relations that these characterizations foster. Norma, for instance, believes that "plants are like us because they need food and water like us, but most importantly, they [also] need love."

## Identities in Conversation: 'Plantonalities' and Personalities

Turner (2014) contends that humans and beyond-humans shape and reshape one another in contact zones. As plants and humans interact and become responsive to one another in the garden space, their connection can enable new identities to germinate and flourish. For example, Hosking and Palomino□Schalscha (2016) record how a Cape Town gardener, Mama Bokolo, saw her garden plants in multiple lights; ranging from mentally therapeutic entities to nourishing food producers. In this instance, as plants take on certain associations (nourishing, healing, therapeutic, etcetera), the gardener can come to assume certain roles (provider, healer, nurturer, etcetera) in relation to the plant. In a similar vein, Archambault (2016) explores how, as a result of the affection and attention that Mozambican men invest in their gardens, their plants come to be imagined as lovers. Degnen's (2009) study on English gardeners reveals similar kinds of identity formation, as they compared their roles as gardeners to the roles of loving and nurturing parents. These examples indicate that through plants-gardener companionships, mutually reinforcing identities can germinate and grow. As Rose (2011, 11) argues, we "become who we are in the company of other beings."

By imagining their plants as babies and themselves as plant parents, gardeners engage in similar practices of identity formation. Gardeners assumed their identities as plant parents to make sense of the level of care that was required to rear "[plant] children [...] into adulthood" (Val). Hitchings (2003) theorises that caring is a fundamental human need that is woven into gardening practices (from pest

prevention to watering cycles). Growing or receiving seedlings intensified gardeners' parental identities and their caring instincts. The majority of the interlocutors experienced a potent mixture of anxiety, curiosity and excitement when they received or grew seedlings and became "a new mother" (Phumeza). As with most new parents, although the primary concern was keeping the baby healthy and recognizing its needs, gardeners also doted on their "new babies." Watching a seedling respond to care and unfold its first leaves, according to Dorina, was like "seeing your baby walk for the first time - you don't even know that your child could walk but then they can and then it's like *aaahhhhh*."

Against this backdrop of plant parenthood, I came to regard the different forms of plant care that gardeners adopted as different parenting styles. On the one hand, Warren (Figure 2) explained that his babies were "well-behaved" and grew "straight and tall" because he exercised "control" over their growth. For instance, he places plastic rings around his spinach stems, to discipline them into growing "neatly" (Warren). On the other hand, Norma was far more tentative as a plant parent and revealed that she was scared she would make "[her] baby angry" if she tried harvesting her comfrey too soon. Similarly, Dorina adopted nurturing and protective parental traits, extending "extra love" to wilting plants and admitting that her "motherly instinct kicked in" when one of her spring onions was damaged. Haraway (2008) asserts that actors are co-created in relation to one another and that as we make or acknowledge our companion species, new identities emerge. Through this lens and through the gardeners' own ideating of identity, it becomes possible to understand how parental identities are cultivated within these companionships.

In relation to these parental identities, plants also came to assume different personalities or, perhaps more appropriately, 'plantonalities.' I coined the term 'plantonalities' because, although plants do not have a human consciousness from which to generate a personality, they are still very much alive and there is a specificity to the form that this life takes (Alcaraz, 2019; Degnen, 2009; Hitchings, 2003). For example, plants have dietary needs and preferences (Degnen, 2009), agentively search the soil for nourishment (Gibson, 2018) and respond to changes in water, soil, sunlight, etcetera (Hartigan, 2019). Given that plants do what they know (Pitt, 2016), one might assume that 'plantonalities' are easy to decipher. It might be assumed that all it would technically

Figure 2: Warren's spinach. Photograph by Lauren Culverwell.

take is a google search to reveal the characteristics of the plant. However, 'plantonalities', as I conceive of them, do not merely refer to the nature of a plant's species, their planted environment, or their reaction to the care and resources they receive. Rather, 'plantonalities' are also produced through the gardeners' imagination as they personify and give meaning to the plant's reactions.

Therefore, 'plantonalities' shift not according to species, but according to the gardeners' personal and distinctive interactions with their plants. For example, while Phumeza's experience with pests predisposed her to characterise her spinach as vulnerable and "weak", Val depicts her flourishing spinach as "in charge, aggressive [...and] excited." Likewise, while other interlocutors' comfrey thrived, Dorina described her particular plant as "funny" because its leaves kept turning yellow and falling off. In this sense, the perception produces the subject (Ogden et al., 2013). As gardeners imagine plants in specific ways, they create distinctive identities for them. This is not to contend that 'plantonalities' are entirely detached from the species' characteristics or the general behaviours of plants, but rather that these features are filtered through

personification. For instance, the fact plants influence the well-being of other plants around them (Seshia Galvin, 2018) is anthropomorphised as fast-growing or dominating plants are dubbed "bullies" (Val) and plants struggling to outgrow one another are characterised as "fighting siblings" (Rose). Therefore, gardeners came to identify their plants not only through the program's informative lessons but through their personal encounters and interactive relationships with plants (Degnen, 2009; Pitt, 2016; Vogl et al., 2004; Hitchings, 2003).

These experiences indicate that beyond-human companionships can and do enable human and beyond-human identities to bud and flourish (Archambault, 2016). According to actor-network theory (ANT) humans, beyond-humans and ideas create social formations and meaning in conversation with one another (Hitchings, 2003). Applying this logic to identity formation means that they are not only produced in isolation but are engendered through experiences and connections between actors. Therefore, plants enabled gardeners to grow identities as plant parents and, in turn, by assuming the role of plant parents, gardeners enabled plants to grow identities as babies. By entering into identity-forming processes with plants, the interlocutors shape part of themselves in relation to the garden space and shape a part of their plants in relation to humanness. While authors like Ingold (2011, 95) have contended that humans are a part of the environment and that through habitation "it becomes part of us," I argue that the gardeners are also engaging in the opposite process. They are not only permitted plants to become a part of their identity but imagined humanness as a part of plants.

By personifying plants, gardeners pull these gardening agents towards classifications of humanness. This arguably blurs nature-human binaries because it invites more living beings into notions of humanness. However, paradoxically, this shift is also partly humancentric. Turning back to the notion of visibility, while it is frequently argued that plant blindness is humancentric (DelSesto, 2020), I maintain that seeing plants as "persons in their own right" (Seshia Galvin, 2018, 242) is also underwritten by a form of anthropocentrism. While interspecies connections have often been acknowledged as blurring nature-human binaries, personified companionships ultimately position the human as the central point of reference. According to Ruzek (2014), the centralisation of humanness is the core of human exceptionalism. Although we may be plural and 'become with' others, not all beings are put together in the same way (Haraway, 2016). Therefore, while forming beyond-human connections on human terms is attractive because they are easily digested by humans (Haraway, 2016), these personified relationships partly overlook the unique make-up of beyond-humans (Gibson, 2018). Having said this, the anthropomorphizing logic only has extended so far and gardeners do remain aware of "the uniqueness of [a plant's] existence" (Pitt, 2016, 86). For example, later on in this paper, I explore how gardeners justify the consumption of their plant babies through a cannibalistic logic that they would never apply to human babies.

## Communication: Listening Leaves and Listening to Leaves

Gardeners nurtured their plant-human companionships through audible and inaudible communication. The majority of the gardeners frequently spoke to, sang to, praised and scolded their plants. The reasons behind this communication varied and were dependent on the nature and purpose of the interaction. On the one hand, Dorina believed that speaking to her plants was essential for their growth and maintained that slow growth was a sign that she had not "spoken to them like [she] should." On the other hand, some gardeners treated their plants as trusted confidants. For instance, Rose (Figure 3) told her babies "a lot of things" that she clearly was not comfortable repeating to me and Norma would feel "relieved when [she] spoke to [her] plants" and felt as if they "listened to [her] secret things." Although plants are not indifferent to human voices (Alcaraz, 2019), they cannot understand these verbal discourses, be they confessions or celebrations. However, the plant's inability to comprehend these communications is not the point; gardeners know the plants cannot understand them and yet they continue to speak to them. For example, even though Rose frequently sings

to her plants "like you sing for a baby", she knows they cannot interpret the lyrics. Rather, the meaning of vocal communication is primarily found in the act of reaching out and in the attempt to share forms of meaningful human communication with these gardening agents.

Gardeners also verbally expressed their concern for their plant's health. Questions like "why are you looking sad and what can I do?" (Phumeza), and "oh you're lazy today laying like this? Don't you know you need to start your day fresh, my darlings?" (Dorina) were routine exclamations. In these instances, the plant's appearance was interpreted as a communication of their well-being, suggesting that they were not so much as speaking to, but speaking with their plants. According to Alcaraz (2019), communication extends far beyond verbal exchanges and all a conversation requires is a sense of responsiveness and a channel to facilitate this response. Although plants have "been widely regarded as inert and passive" (Seshia Galvin, 2018, 241), posthumanism and interspecies movements contend that plants are intelligent, agentive, communicative, observant and relational entities (Hall, 2011). Following this logic, they are not merely entities to be spoken to but can converse with observant caretakers through their physical states. Pitt (2016) outlines the possibilities for communicative, caring plant-human connections by citing an encounter where a gardener claimed that the plant would 'tell' them how to prune it. Likewise, a gardener in Degnen's (2009) study asserted that gardening is about experimenting with conditions until the plant is "happy."

As gardeners grew "green eyes", they began relating to their plants as highly communicative companions in their own right. As argued above, although plants are constantly communicating their state through processes like flowering, wilting, thriving, seeding, and dying, much like babies, they cannot literally vocalise what they want or need. And yet, as McWhorter (1999) maintains, successful gardening is reliant on the gardeners' ability to listen and respond to these non-vocal discourses. Similar to new parents, gardeners can only comprehend what their plants require by paying attention to these nonverbal signs

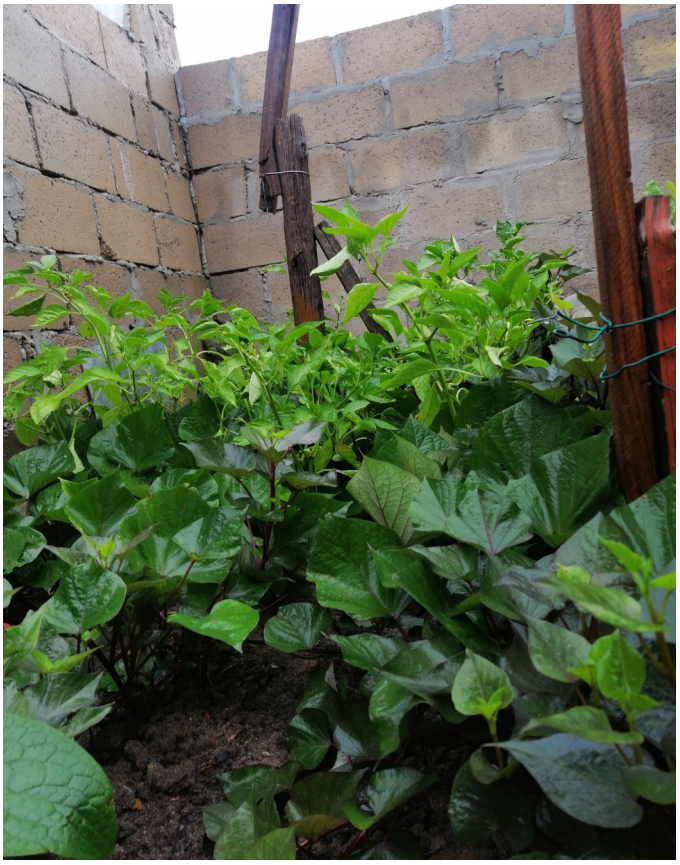

Figure 3: Rose's "listening leaves." Photograph by Lauren Culverwell.

and by compiling an index of appropriate responses over time. For example, if a plant's leaves were brownish, it would mean that it was drowning and required less water or if a plant was wilting and its body felt soft it was a sign that the plant was "hungry [for fertilizer] or thirsty [for water]" (Dorina). Similarly, Rose explained that she would loosen the soil if her plants looked "bad or sick" so that they could have some "room to breathe." Typically, interlocutors visited their gardens at least once a day to "listen to it" (Dorina). By "look[ing] at the leaves" (Val) during these daily visits, gardeners could determine the plant's health and track how it responded to subsequent care and interventions. These examples indicate that part of what successful gardening meant to the interlocutors, was "listening to the plants" (Pitt, 2016, 85) and speaking back to them through verbal and non-verbal acts of care.

The claim that plants have agency has long been debated in anthropology (Sbrogna, 2018; Hartigan, 2019; Seshia Galvin, 2018; Degnen, 2009; Elton, 2021). Plants have been recognized as social, agential and communicative and there

is a scientific consensus that plants can "perceive, assess, learn, remember, resolve problems and make decisions" (Hartigan, 2019, 1). However, Elton (2021) asserts, plant agency also emerges through their connections with humans. As ANT illustrates, agency is not only produced by individual bodies, but is produced through relations of humans, beyond-humans and ideas (Hitchings, 2003). This sense of agency forms when a plant's needs, likes and dislikes are taken into account in human-plant companionships (Elton 2021). In the interlocutors' experience, plants revealed their sense of agency and their plantonalities partly through their "likes and dislikes" (Degnen, 2009, 160). Given that plants sense and react to environmental changes more strongly than animals (Hartigan, 2019), these likes and dislikes while not always easy to comprehend, were fairly easy to see. For example, Norma discovered that cabbage "got sick" when "water [was] sitting on top of the leaves" and Val likewise discovered that her tomatoes disliked having the liquid compost touch their leaves. Plants reacting negatively to some forms of care and well to others signaled another dimension to their 'plantonalities' and another dimension to the systems of gardener-plant communication.

These systems of plant communications were not always easily translated or comprehended by human actors. As Haraway (2008, 16) contends, companion species train "each other in acts of communication [they] barely understand." After all, plant lives cannot be completely understood by the gardener and plants often respond to certain forms of care in what can seem to be unexpected ways (Turner, 2014; DelSesto, 2020). Gardeners reported feeling anxious when their language of care was not well received or when they could not interpret their plant's leafy narratives. For instance, Warren, Val and Rose expressed that potatoes were particularly hard to "read" because big and healthy leaves did not necessarily mean that the potatoes were ready to be harvested. Similarly, Val admitted that she finds plant care stressful because while she does "pay attention to [her] plants, she [doesn't] always know what they need." In these moments, comprehension is decentred as "a precondition for conversation" (Alcaraz, 2019, 78). Gardeners' inability to understand what their plants needed or wanted did not stop them from responding to them through acts of care.

These systems of human-plant communication contributed to a sense of relationality in the garden. Elton (2021) describes the concept of relational health as an ongoing process of well-being that is generated through companionships. The theory encompasses beyond-human connections, suggesting that health is constantly unfolding through partnerships with the natural world. Comparably, gardeners maintained that as they took care of plants, the "plants took care of them" too, not only through their nutritional value but through their emotive value. For example, Val said that they added "excitement" to her life and Rose said that she "loved her plants" because they kept her from being "alone" and helped her stay "busy." Likewise, Phumeza said that her plants "give love" and help her "relax" when something is "eating at [her]." This root system of relational well-being between companions extended both ways; when their plants were in poor conditions, the gardeners reported that they would feel poorly too. Norma reported that it is "painful" to see her plants wilt in the heat and often tries to not "look at it" during the hottest periods of the day. Similarly, Phumeza said that when her plants are "struggling to grow" she also feels like she is "struggling [...and] feeling bad." In this sense, the gardeners' emotional state mirrored the physical state of the plants. Interestingly, Rose believed that this dynamic works the other way too, claiming that her plants "know when mom is not okay" because when she argues with someone near her garden or touches them with "angry fingers" the plants look sick.

This sense of relational health and the deep conversational connections that accompany it may indicate a blurring of nature-human binaries. After all, humans have spent decades building up what Ingold (2000, 8) describes as "a master narrative about how human beings [...] have progressively raised themselves above the purely natural level of existence to which all [beyond-humans] are confined." In this hierarchical framework, plants are either cultivated and utilized to further human progress or ignored (DelSesto, 2020). To some

degree then, the emotive and communicative channels that gardeners build do break down this hierarchical narrative and blur nature-human binaries. However, there is also a reciprocal dimension to this relational connection and conversation. In contrast to gardeners who reportedly loved plants for their own sake (Archambault, 2016), the interlocutors established their affective relationships based on if the plant was coded as useful. For example, similar to pests, weeds were framed as the "bad guys" (Phumeza) or "threats" (Warren) to the garden unless they could be transformed into useful compost. This indicates gardeners were not necessarily blurring nature-human binaries but were rather selectively engaging with gardening agents that have been coded as useful. For instance, Val frequently reminds her plants that "[she] will take good care of [them] and in turn, [they] must grow nicely for [her]." This opens up a complex and intriguing space from which to think about the beings that come to be "companion species" (Haraway, 2016, 132) and the basis on which that connection rests.

## Eating Babies: Cannibal Consumption and Reaped Reciprocation

As previously discussed, the literature concerning gardeners' connections with their produce in South Africa has been consumed by a focus on food security. However, as I have just shown, as gardeners spin themselves into beyond-human webs of relationality to produce vegetables, the gardens come to produce more than food. Sbrogna (2018) refers to the labour, energy, resources and time that goes into produce production as "embodied energy." Since gardeners had watched this "embodied energy" accumulate through the cumulative labour, time, meanings, and emotions that they invested in their garden, the produce is imagined not just as the plant's product, but as a beyond-human and human co-creation (Sbrogna, 2018).

Given the perceptions of plants outlined, I anticipated a tension between this personification and the cannibalism of "eating babies" (Val). However, on the contrary, these anthropomorphised ties contributed meaning

Figure 4: Dorina's lettuce harvest. Photograph by Lauren Culverwell.

to harvesting, preparing, and eating vegetables. For example, Phumeza's plants "call [her] from a distance" to harvest them because they are so "beautiful *and* mouth-watering." In this instance, the plants are imagined as visually vocalising their edibility and inviting consumption because, and not in spite of, their position as communicative companions. This imagining relates back to the logic of reciprocation and the logic of "getting out what is put in" (Dorina—Figure 4). As Rose explained, the produce "are [her] babies but they also give [her] something [...] they must give back to [her] because they have taken." In this exchange, the labour and love that characterise the gardeners' personified relationships are tangibly reaped through the produce. From Phumeza waking up at midnight to check her plants for snails to Val spending her money on store-bought soil, the gardens consume the gardeners and their resources in very tangible ways. In other words, as gardeners eat their gardens' produce, gardens eat up the gardeners' time, energy, emotions, attention and resources. Therefore, these processes of reciprocity simultaneously helped form companionships with the produce

and justified the consumption of those ripe connections.

This reciprocal logic extends its roots beyond -human and plant relations. A web of beyond-human interactions is spun as gardeners feed uprooted plants, vegetable peels and gardening scraps from the garden back into the garden through the worm farm or compost buckets. I find Haraway's (2008) theory of 'becoming-with' and Latour's (2005) conception of 'the social' to be useful framings to consider how mushy interactive networks form as soil, plants and humans feed and eat one another. This messy entanglement helps heal the previously discussed metabolic rift which separates production-consumption relations and the disrupted nutrient cycles that typically characterise this division (Dehaene et al., 2016). Furthermore, this reciprocation—of mutual eating and enabling life—helps gardeners to see gardening agents living through one another and thus maintaining relevance and life beyond their deaths. As Rose pointed out, endings are not necessarily deaths, because when she harvests seeds to grow later or uses the vegetable scraps as compost, the plants "never really die." While many gardeners did report a sense of loss after uprooting or harvesting a plant, there was also an overarching sense that this was "just the way it must happen" (Phumeza). In these moments, some gardeners actually talked their plants through this logic. For example, Dorina comforted her lettuce as she harvested it, explaining to it that "I need to take you out because your time has come [...] your period for growing is done so let us just enjoy you."

## Ripe Connections: Sowing Selfhoods and Eating Emotions

Given that as interlocutors glean a range of emotions that have grown alongside the plants as they harvest the produce, it is little surprise that far from being a mundane chore, harvesting is an anticipated celebration. For instance, Dorina is "100% proud of herself and her garden" when she gathers her spinach and Warren was "excited beyond words" when he last harvested lettuce. These emotive connections also coloured the cooking and consumption processes since the process of growing food for oneself often prompts a sense of excitement around its consumption (Sarti et al., 2017). Although as Martin et al. (2017, 594) argue "the value given to produce from the garden [adds] to the value of cooking", gardeners also produced additional meaning as they cooked their produce and experienced its "sensual realities" (Dowler et al., 2009, 207). For example, Rose said she "loved" listening to "crispy crrrr crrrr" as she cut open her peppers and Dorina said loved tasting the "amazing" crunchy "tccchhh tchhh" of the spring onions.

Artmann et al., (2021) contend that the 'external' process of growing, harvesting and eating healthy vegetables, can nurture strong 'internal' human-produce companionships. However, I discovered that these internal bonds extended their root system beyond merely a connection *with* the produce to a connection *in* the produce. Through intense emotional, physical and mental labour, gardeners implanted part of themselves in the garden that was reflected in the harvest. Val explained that her produce is "[her] creation" and Rose is "happy" during harvesting because she thinks, "this is me right here. I am a harvest." Produce-human connections, thus complicate nature-human dichotomies and identities as produce is not just personified, but seen as part of the gardener as they extend a part of themselves into their gardens.

While food has traditionally been interpreted in anthropological literature as a representation of the self (Mintz, 1996; Delaney, 2004); in this instance, food was not simply a representation of the self, but was, in part, the self. As Warren says "[his produce] isn't like other vegetables; these are part of [him], they grow out of [his] hands" and Rose expressed that her vegetables "grow from [her] head and the heart." Tracing the 'you are what you eat' logic in relation to these sentiments, gardeners not only consume the produce, but also eat something of the parts of themselves—of the "embodied energy"—that they invested in the produce in the journey from cultivation to consumption. There is a recognition of part of the self within the gardening agent, further illustrating that the interlocutors' identities are caught up in a "plurality of existences" (Ruzek, 2014, 8). Contentions that cooking transforms raw materials from a "state of nature to a state of

culture" (Fischler, 1998; Levi Strauss, 2008), do not account for these moments of the reworking and collapsing of nature-human identities and for the binaries that occur as these relationships form.

Gardeners not only projected themselves into the produce but allowed the garden to plant something in them. For example, Dorina felt that her "determination [to be a good gardener is] growing" alongside her vegetables and Warren explain that "the more effort that [he puts] into the food the more he respects it." Other interlocutors reported other traits, habits or emotions that have germinated inside of them through gardening. On the one hand, when the garden was flourishing this engendered "pride" (Rose) or "excitement" (Val) in gardeners. On the other hand, when the garden was not doing well, negative feelings like "sadness" (Norma) or "disappointment" (Phumeza) took root. Although plants cannot feel the emotions of the gardeners, they can experience the benefits of this emotional production as gardeners draw on their feelings and sense of relationality to motivate their plant care (McEwan and Goodman, 2010). As Haines (2021, 46) contends, "nonhumans [can] enact agency on [humans] through a range of [human] emotions." Human emotions and labour tangle in reciprocal logics as gardeners attempt to give back to the garden through emotionally motivated labour in order to reap positive emotions and healthy produce.

The gardeners' reaction to pest damage most clearly illustrates how this logic plays out and connects to the codification of life. For example, concern was etched into Phumeza's face as she showed me her bird-tatted spinach leaves and explained how sick she feels knowing that her babies are being eaten (Figure 5). However, her emotional distress emerged not because her plants were being eaten, but because of *who* was doing the eating. In other words, part of the reason why pest damage was so distressing was that it did not feed back into the encouraged reciprocal cycle of eating and feeding that underpinned the gardening logic. Phumeza's response was prompted by the sense that she was failing her duties as a protective, nurturing parent and, by extension, failing to maintain her role in the reciprocal bond. Out of this sense of failure or success, gardeners grew either positive or negative emotions. These emotions could be mobilised, redirected, and contested, through physical labour and acts of care toward the plants. For instance, many of the gardeners created scarecrows, hung up flashing bottles or built net coverings for their plants to protect them from birds. Although food has been acknowledged to shape individuals psychologically, biologically, and socially (Fischler, 1998), in this case, produce was also shaping the emotional worlds of their consumers, which in turn, was shaping the physical gardening world. In moments like this,


Figure 5: Pfumeza's pest-eaten spinach. Photograph by Lauren Culverwell.

as Dowler et al. (2009) suggests, care is action because gardeners are blurring the boundaries between emotional labour and physical labour. This explains why gardeners like Norma saw their garden not as "work" but as a labour of "love."

## Grown versus Bought: Tasting Difference, Tasting Small Justice

While food choices have long been recognised as protests against unsustainable or unethical hegemonic systems (Clark, 2004). Kirkpatrick and Davison (2018) assert that home gardening practices can articulate a radical protest against industrial production practices and capitalist consumption. While none of the interlocutors started gardening to explicitly reject contemporary capitalist production processes, a moral and physical distaste for store-bought vegetables and a strong preference for

homegrown grew up alongside the produce in the garden. As their convictions took root over time, they were translated into action *through* gardening practices (Dowler et al., 2009), allowing the interlocutors' gardens to be read as serious, albeit small, protests against the forms of production around them. By reconnecting the identity of consumer and producer gardeners were not only partly breaching the metabolic rift (Dehaene, et al., 2016), but attempting to produce vegetables on their own terms. Therefore, I came to think of the interlocutors' gardens as important spaces of "small green justice", a term that I coined to capture the fact that *justice is justice*, even if it was initially unintentional and even if it plays out on a small gardening scale.

Part of this "small green justice" involves speaking back to the current hegemonic systems of food production that, according to Heitlinger et al. (2021), are untenably humancentric and ignore how beyond-humans relate to humans. I also coined the term "intimate production" to express the opposite of this humancentric production. "Intimate production" is a phrase that describes the intimacy that gardeners invest into their produce as they nurture seeds into consumable products. This production was more "personal" (Dorina) because of the "effort" (Dorina) that was embedded in the produce. As Phumeza reported "[she] can't help being way more connected to their food" because "she's put love into it." In 'intimate production', gardeners knew and controlled what had gone into the plants or rather, what had not gone onto their plants. In other words, they "know [their] own" (Rose) in a way that contemporary commercial consumption does not facilitate. This concept can also be linked to the notion of food sovereignty, which according to Shiva (2021) encompasses sovereignty over your health and life but also extends to a deeper justice for and understanding of other lifeforms. "Intimate production" also captures something of the direct line between the garden's produce and the gardener's consumption. For example, Dorina said that her vegetables go "straight from the garden into [her] mouth." Similarly, Norma said that her produce was much better because it came "from [her] and to [her] pot." Unlike the average capitalist consumers that have traditionally been framed as holding deskilled and disconnected purchasing roles (Dowler et al., 2009), the interlocutors were active, emotive consumers who enjoyed consuming intimately-produced products.

This direct intimate line between garden and consumption was frequently sharply contrasted with commercial production practices. The concern that producers are not transparent with their practices and processes is hardly a new phenomenon or even one that is particular to South Africa (Dowler et al., 2009; Clarke, 2004; Van Holstein, 2017). However, even though many of the interlocutors live in Philippi, a semi-agricultural district in Cape Town with sprawling open plots of farmland, there is still a deep-rooted distrust of commercial production. Gardeners felt that the produce they bought, although perhaps locally grown, was not fresh, had been processed by too many hands or was stripped of its value. Since store-bought vegetables have to meet certain standards of consistency, safety and cleanliness, they are often presented in ways that are divorced from the realities of production (Dowler et al., 2009; Clark, 2004; Fischler, 1998). As vegetables are washed, standardised, processed, and packaged, evidence of the individual and intimate realities of production that allowed gardeners to connect to their vegetables are eliminated or invisibilised. To the gardeners, store-bought produce is not, as Fischler (1998) contends, without identity but rather they are imbued with tainted identities of disconnection. If the gardener's produce contains something of the gardener's personhood and emotions, then store-bought produce contains notions of commodity fetishism, chemical usage and secret practices. For instance, in contrast to 'intimate production', Norma complained that "big farms don't even know their plants or where they end up."

The most commonly lodged concern against commercially produced vegetables was the rumoured high chemical usage that industrial farming requires. Even though gardeners did not exactly know what chemicals farmers were using, there was general a distrust of this aspect of commercial production. While homegrown vegetables were "pure pure pure

pure" (Warren), commercial produce was typically seen as "very bad for your health" (Val). The majority of gardeners not only saw commercial produce as "contaminated" (Martin et al., 2017, 593) by chemicals but following the 'you are what you eat' logic, maintained that eating store-bought vegetables could contaminate the human body. For example, statements like "if you eat chemicals, you become chemicals", or "[home-grown is] healthy and it keeps you healthy" (Warren) were frequently repeated as a means of acknowledging that food can "enter into what we become" (Bennet 2010, 51) and that "every food is reckoned to have an effect on the body" (Fischler, 1998, 280). Gardeners thus utilise these beyond-human relations to tangibly know and shape their own health in meaningful ways. The gardeners' awareness that their health is so closely intertwined with the health of the produce does not simply blur nature-human dichotomies but does so in a very specific way with a very specific set of terms. As discussed previously, connections to beyond-humans in the garden space were established on the grounds that interlocutors would benefit from the companionship.

## Gleanings: Conclusions and Final Thoughts

Turner (2014) contends that humans and beyond-humans form part of an interconnected mesh of life-sustaining strangers that shape and reshape one another. However, as Pungas (2019) posits, in relation to food production, this mesh becomes less noticeable and less intimate as the roles of consumer and producer are separated. Home gardening is thus a particularly interesting practice because gardeners are partially bridging the consumer-producer divide and actively knitting themselves into interspecies companionships. Yet, as this article has also attempted to illustrate, the relationships that gardeners grow with their plants extends beyond merely the practice of food production and into deeply loving and nurturing bonds. By growing, harvesting, preparing and eating home grown produce, gardeners are engaging with a hodgepodge of reciprocations, emotions, embodied energies, reciprocities, imaginations and projections of the self into the beyond-human. Much like the veins of a leaf, the themes in this article are connected and crisscrossed. The imagining of plants as babies leads to forms of verbal and non-verbal care and communication. Likewise, the conversations that gardeners have with their plants contribute to their personification and systems of intimate production. The midrib from which these rich imaginings branch is the visibility of plants and the making of green companions out of plants. It is through seeing plants as valuable entities that these systems of meaning, identity, communication and relationality are established that allow for small green justices to emerge.

On the one hand, as this article has attempted to illustrate, nature-human binaries are broken down in these processes. Plant-human partnerships allow gardeners to break down the notion of a singular, isolated body by taking the interconnections between the health of the plants and their own human bodies seriously. As the interlocutors come to see themselves and their health as embedded in the plants and produce, they recognise that "becoming human [is] an interspecies collaborative project" (Rose 2011, 11) and that part of their humanness emerges through these physical and imaginative connections with gardening agents (Ogden et al., 2013). In this sense, "engagements with other-than-human beings inspire new ways of relating" (Archambault, 2016, 247) to and in the world.

On the other hand, the "codification of life" (e.g., "plants" versus "weeds") and the cycle of reciprocation cause these kinds of classifications to emerge. The relationships that gardeners form with plants and produce are clearly contrasted by the stark rejection of any entity that could not explicitly engage in clear cycles of reciprocity or mutual benefit. Thus, I have suggested that a breakdown of binaries only occurs when a beyond-human has been classified as *useful or potentially useful* to humans. The engagements, while leading gardeners to an understanding of their interconnect-ness to nature, are, first and foremost crafted in relation to their utility to gardeners. While authors like Artmann et al. (2021) argue that urban gardening is a way to combat the fact that urbanization compromises

residents' engagement with natural worlds, a question emerges around the nature of the connection itself. Frameworks like post-humanism that reject human/beyond-human hierarchies and embrace the interconnectedness of all species (Ruzek, 2014) thus do not neatly map onto this landscape of classifications and selective companionship. This coding and the reciprocation that accompanies it adds nuance to claims that gardening blurs nature-human binaries (Martin et al., 2017; Artmann et al., 2021; Heitlinger et al., 2021; Turner, 2014).

Bearing this in mind, it could be posited that if the artificial binary between nature and humans is *truly* artificial, then pointing to a humancentric attitude is a moot point. If we are all in processes of 'becoming with' others, then what does it matter if plants take on human traits? After all, to define something as humancentric is to understand humans and their ways of relating as separate from the natural world. And yet, just because the binary is artificial, it does not mean that it has and does not wield real power and impact the world in material ways. As literature around the metabolic rift illustrates, nature-human division disempowers individuals and damages ecological cycles on small and large scales (Dehaene et al., 2016; Pungas, 2019). Furthermore, even the fact that gardeners kept saying that their gardens are a way for them to connect with "nature" indicates that nature is still conceived of as an entity separated from them as humans that they can "connect" with. Therefore, it is important and relevant to pay attention to the nature of the relationships that appear to break down human-nature dichotomies, even if they contain contradictory logics. This article has attempted to open up a space from which to consider the ways that contemporary environmental practices may be re-centering the human at the exact moment that they seem to be dissolving binaries. As the species turn anthropological circles gains traction (Seshia Galvin, 2018), paying attention to the nuanced layers of meaning that underwrite beyond-human relations in spaces like home gardens is salient if we are to begin to understand the effects and potentials of these connections.

Having said this, it must be acknowledged that this article itself has also centred itself around the human experience. I have only examined how humans understand these companionships, while sorely neglecting the narratives in the plants. As Heitlinger et al. (2021) argue, humans are still speaking on behalf of beyond-humans, and often doing so through very humancentric lenses. However, it is not that these beyond-humans are silent, it is that they are silenced by the questions that researchers ask and the research we do. However, there are also real attempts in recent scholarship to decentre the "human both in subject matter and research methods" (Sbrogna, 2018, 74). This is not to contend that researchers and gardeners can fully know or respect beyond-human terms and signs (Gibson, 2018), but to suggest the potentials for connection. My research has sought to recentre interspecies companionships, which according to Artmann et al. (2021), have often been marginalised in anthropology. However, there is room for a multi-disciplinary project that draws on disciplines like soil and plant sciences to demonstrate how all actors in beyond-human relationships respond to one another in the context of home gardening. Furthermore, there is also space to investigate how wider historical, political and economic systems inform and shape beyond-humans and the ways in which they relate to humans.

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