

What kind of people are plants?

The challenges of researching human-plant relations in Amazonian Guyana

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A farmer among the fish poison plants (*aya*) in his garden | Yupukari, 2012.²

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² All photographs by Lewis Daly, 2012-13.

“Plants feel!”

“Forests think!”

“Trees talk to one another!”

In recent years, the topic of plant intelligence has been making the science pages of news publications with increasing regularity. Consider, for instance, November’s BBC article detailing a host of expert opinions on topics such as plant cognition and the “wood wide web” that facilitates communication between trees (BBC 2015), last year’s *New Scientist* article on plant thinking, sensing, and learning, which draws analogies between human brains and plant root networks (Ananthaswamy 2014), or Michael Pollan’s 2013 piece in the *New Yorker* concerning the emerging field of “plant neurobiology” (Pollan 2013). Journalistic publications such as these are helping to bring cutting-edge scientific advancements to a broader audience, and serving to revolutionize public understandings of botanical life-ways in the process. As is becoming increasingly apparent, plants communicate and interact with one another and with other kinds of beings in sophisticated and unexpected ways. But how, one might ask, does this relate to the social sciences and the traditionally humanistic field of anthropology?

Herein, I make a few comments concerning my experiences of conducting ethno-ecological research in Makushi communities of Amazonian Guyana between 2011 and 2013. In so doing, I hope to illustrate some of the challenges I faced – both methodological and philosophical – in attempting to account for the relationships between humans and plants that permeate Makushi culture and cosmology. As a social anthropologist experimenting with the methodology of multispecies ethnography, my research subjects included not only human beings but also another kind of living self: *plants*.

As Terrence Deacon has written, “we tend to underestimate the complexity and subtlety of much non-human social communication” (1997: 31). Other-than-human species communicate with one another – and with humans – in sophisticated and sometimes elusive ways. How, then, can we make sense of these cross-species “social” relationships? So-called

posthumanist thinkers such as Donna Haraway (2015) and Anna Tsing (2012) have advocated a move away from human exceptionalism and toward a kind of anthropology that takes non-human beings seriously. These scholars have begun to explore how other species – animals, plants, fungi, even bacteria – represent their worlds, and how this may relate to *us*.³ In this vein, Eduardo Kohn has argued that “how other kinds of beings see us matters... Encounters with other kinds of beings force us to recognize the fact that seeing, representing, and perhaps knowing, even thinking, are not exclusively human affairs” (2013: 1).⁴

But – the question must be asked – how feasible, in a practical sense, is this multi-species proposal? An anthropologist can quite easily ask a human what they may think about plants; this is the conventional remit of ethnobotany. But how can one – or, indeed, *can* one – infer what plants may “think” of humans? Are we not “merely” investigating what humans think plants think, or even what humans think plants think humans think? What, indeed, may we even mean by “thought” in the cross-species domain of ecological relations? Difficult questions such as these become all the more pertinent when investigating indigenous Amazonian cosmologies, where “nature” is typically viewed as an inter-subjective field, personhood is not restricted to the human, and in which certain types of plants can be powerful subjects exhibiting the ability to influence human society in profound ways.

How, then, might horticulture be conceptualized in cosmologies where plants, too, can be thinking selves?

³ It should be noted that in much posthumanism, plants are rather conspicuous by their absence. Perhaps predictably, the majority of multispecies discourse at the current juncture concerns human-faunal relationships. Put simply, there exists a human-faunal bias in multispecies anthropology, at the expense of plants and fungi (*cf.* Rival 2012: 69; Tsing 2014: 31).

⁴ ³ In Kohn’s (2013) view, ecosystems are relational and inherently meaningful, being constituted of multidirectional webs of communication. By tracing lines of communication across species boundaries, Kohn proposes, we begin to glimpse what “an anthropology beyond the human” might look like.



A Makushi farmer in her cassava farm (*mîi*) | Yupukari, 2013

The Carib-speaking Makushi people are expert horticulturalists, in that they exhibit and utilize specialized knowledge and techniques relating to the ecology of living plants. The local livelihood is composed of the complementary interaction of swidden agriculture, fishing, and hunting, with a supplementary reliance on the gathering of wild plants. Forest farms (*mîi*) are intercropped spaces of hyper-diversity in which humans, plants, and animals come together in symbiotic relationships of nurture, care, and management. Cast in the light of innumerable shades of green and adorned with ornamental shrubs and flowers beds, gardens are places of great beauty in which cross-species relations are forged in the creative processes of shared selfhood. Makushi farmers cultivate a dazzling array of plants, including hundreds of varieties of the staple crop bitter cassava (*kîse*). In any given farm, one will find food crops, craft materials, narcotic shrubs, ornamental cultivars, medicinal remedies, and

shamanic charm plants – not to mention the frugivorous birds, pollinating insects, snakes, lizards, and mammals.⁵ Farms, in short, are diverse living spaces of multispecies sociality.

Put simply, plant-life in the Makushi conceptual system does not fully accord with the natural scientific model of flora. For the Makushi, plants are ever-present protagonists in the multispecies performance of life. Indeed, certain plants are – or can be – powerful persons endowed with animating spirits (*ekaton*), exhibiting various extra-botanical capacities.

Makushi farmers have a deep understanding of the symbiotic interdependencies of plants and other kinds of beings. Plants are understood to exhibit phenomenal awareness and multi-sensory perceptual capacities: they perceive and interact with their environments in complex ways. Like humans, plants can sense their surroundings, and it is via these shared sensory pathways that plant-beings and human-beings communicate. Farmers draw parallels between the worldly sensitivities of plants and the kinetic movements of human bodies: for instance, the swaying of cassava leaves in the wind (*a'situn*) is often described as the plants “waving”. People speak, sing, and recite spells to their crops. Plants, too, speak back – often via the medium of dreams (*we'ne'*) or shamanic visions. Makushi gardeners conceive of their cassava crops as consanguineal kin. When Aunty Elsa, an elder from my host community of Yupukari, would routinely describe her cassava crops as her “children” (*more yami*), she was not resorting to mere metaphor; rather, for Elsa, humans and plants are embroiled in bona-fide cross-species relationships of relatedness. The relations between plant-children and their human parents are forged and reproduced via the nurturing acts of horticulture.

Plants are core actors in shamanic ritual and central motifs in myth. The spirits of certain extra-powerful charm plants (*bina*) are said to roam the forest and savannah at night like invisible homunculi, killing or healing of their own volition.⁶ These secret plants are key allies of the shaman (*pia'san*), who forges deep and enduring relationships with them over his or her career as a ritual specialist. Thought of as *plant shamans*, these spiritually-potent plants

⁵ In the village of Yupukari alone, my local collaborators and I recorded over 100 species of crops, 76 landraces of cassava (*kise*), 87 species of medicinal plant (*esak*), 61 types of charm plant (*muran*), 26 shamanic ritual plants, and 8 species of fish poison plant (*aya*).

⁶ See Andel *et al.* (2015) on *bina* charm plants in the Guianas.

exhibit similar specialized capacities to the human shaman, such as the ability to cure or kill at will. The central healing rite of Makushi shamanism – known in Creolese as “beating leaf” – is centered on invoking these shaman-plant alliances.



A Makushi shaman (*pia'san*) conducting a “beating leaf” ritual | Yupukari, 2012

What, then, may it mean to say that humans and plants engage in social relationships? How can a farmer and a crop plant be related to one another as kin? How can a plant shaman kill a human being by its own volition? In order to make sense of such claims, it is necessary to investigate the constitution of indigenous Amazonian cosmologies in all their complexity. The pioneering work of Philippe Descola (1994) and Eduardo Viveiros de Castro (1998) has done much to improve our understanding of personhood and animism in Amazonia (see Costa and Fausto 2012). However, in my view, there is a lot more work to be done. How, for instance, do perspectival models of Amerindian cosmologies account for *plant personhood*?

The simple answer is, for the most part, they do not. To rectify this conceptual blind-spot, I argue, we must turn our attention more fully to ethno-theories of life in Amazonia.

It is not enough to simply characterize plants as people, and move on. Questions must be asked about different forms of personhood and subjectivity in Amazonian cosmologies (and elsewhere). How, for instance, might a human person differ from an animal person, and how do these types of selves differ from plant people? Further, one may ask, what about spirits (*imawari*), those invisible and often dangerous beings that populate the landscape and exercise great influence over the dynamics of life in the rainforest? How, indeed, do these diverse and divergent beings interact with one another across species boundaries? A complex picture begins to emerge of a variegated field of forms of selfhood or subjectivity; a veritable cosmos of selves. The very constitution and character of this cosmoecological assemblage is predicated on radically divergent kinds of selfhood. In my view, the challenge of harnessing this diversity is – precisely – the core remit of multispecies anthropology.

How, then, does this all relate back to cutting-edge scientific research concerning plant intelligence and communication? Collaborations between natural scientists, social anthropologists, and indigenous experts can contribute a great deal to these on-going conversations about plant sentience and communication. Plant-life in Western knowledge systems has for too long been relegated to the subsidiary status of semi-inert extras in the elaborate dance of life. Plants, however, are anything but silent witnesses. Only now are life scientists coming to understand the complex modes of social interaction in which plants engage. One suspects that if a Makushi shaman were to read a piece titled something like “*Plants think!*” in a glossy news supplement, they wouldn’t be all too surprised. In this respect, much can be learnt about the complex social lives of plants from indigenous peoples in Amazonia and elsewhere. In the collaborative and mutually-beneficial processes of knowledge sharing between scientists and local people, we can further our understandings of the labyrinthine complexities and often-overlooked subtleties of interspecies engagements.



A flowering pineapple plant (*kaiwura*) | Rewa, 2013

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Lewis Daly recently completed his doctoral thesis in Anthropology, entitled *The Symbiosis of People and Plants*, at the University of Oxford. The thesis is an ethnographic study of human-plant engagements among the indigenous Makushi people of Amazonian Guyana. Lewis's research interests include the animism of plants, horticultural diversity, shamanism, ethno-ornithology, fermentation technologies, and the anthropology of conservation.

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