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Selfish Plants and Multispecies Creativity: Alternative Narratives in Environmental Discourse

Abigail Bowen

The concept of plant selfishness derives from scientific analysis of plants' self-recognition capabilities and their self-interests, as well as the literary imagination of plants as Other or as subjects. Considering plant agentic capacity prompts the reconsideration of human-plant relationships. Heather Sullivan's theoretical concept of the "dark green" frames this reconsideration of plant-human relations by advocating for a recognition of humans' dependence on plants for food, oxygen, and ecosystem structure, and understanding human-plant relationships in the geological era of the Anthropocene, in which humans' industrial impact is traceable across the planet's entire surface. The "dark green" draws awareness to the Anthropocene's changes in culturally embedded human-plant relationships, emphasizing the "darkened" (or altered and polluted) dependence on the "vegetation that feeds us (and/or the animals we eat) and produces much of the oxygen we breathe."¹ Acknowledging plant agency and how their agentic expressions become languages interpretable by surrounding plant and animal creatures, an exchange described as multispecies communication, emphasizes valuable multispecies dialogues that must occur in order for multispecies to cohabit their ecosystems. Emphasizing the importance in dialogues of multispecies communication for survival gives rise to a provocative envisioning of multispecies justice, which extends environmental rights of land, water, and food not only to all humans, but to all species co-

habiting the planet. Multispecies justice respects and dignifies nonhuman—or, better, more-than-human—persons while advocating for their environmental rights. Environmental discourse in Science Fiction tends to fall back on either nihilistic apocalyptic futurism as a result of humanity’s corrosive influence on earthly life in the Anthropocene or futurisms of utopian technofixes which presumably “fix” environmental disasters with human technology, all focusing primarily on human agency. Such paradigmatic futurisms typically leave little room for the power of more-than-human agents.

Ecofeminist Donna Haraway crafts the theoretical framework “staying with the trouble,” which dismisses the overly optimistic faith in technofixes and defies apocalyptic nihilism and its unproductive qualities. She instead calls for the present response-ability of living and dying on a damaged earth with our fellow living beings. Haraway demonstrates this response-ability with the conceptual understanding of Navajo string games, or “string figures,” which exhibit the continuous interwoven dependency each creature has on their environments and fellow living beings. She urges response-ability for multispecies players of string figures, which are stories created by those players “who are enmeshed in partial and flawed translations across difference, redo[ing] ways of living and dying attuned to still possible finite flourishing, still possible recuperation.”² Haraway depicts multispecies playing string figures with abounding intricate connections as cohabitants within ecologies: each interwoven tug must be accommodated and held responsible.

Plants express response-ability by growing in their environments and simultaneously changing, shaping, and negotiating with their surroundings in real time. They physically progress and retract according to permission from environmental cues and the tugs and pulls from other string figure players, taut with multispecies relationships in a materiality constantly redefined by trucks of selfishness and lifelong experimentation of form. Human-plant cultures demonstrate humans’ life-dependency on plants, evoking our response-ability as agents depending on the sustenance of human-altered ecosystems and environments. Haraway urges attentiveness to multispecies communication and entanglement through redefining kinship among ourselves as humans and among multispecies, moving past older formulas of linear biological kinship into a more multigenerational- and multispecies- inclusive horizontal kinship. “Making kin” among multispecies supports “staying with the trouble,” forming hotbeds of multispecies communication and collaboration, living and dying well within the chaos that irrevocably figures the cosmos, queering kinship for a biodiverse, livable ecologically-webbed world. Living and dying well veers away from focusing primarily on humanity’s progress as rationally detached from nature and rejects assumptions about unique human capabilities of language as compared to other species.

In this essay, I focus on Haraway's work with multispecies communication, but I specifically consider plants and their relationships with and within humans and more-than-humans. Combining the two ecofeminist and eco-critical theoretical frames of Sullivan's "dark green" with Haraway's "staying with the trouble" inspires more dialogues (or hotbeds of communication, as Haraway likes to call them) in human-plant relationships, indicating that we are already in and of each other as active agents living and dying on terra.

I consider human-plant relationships and "staying with the trouble" by analyzing and discussing the dystopian and utopian impulses in Sue Burke's *Semiosis* (2018) and Joan Slonczewski's *A Door into Ocean* (1986), both of which depict more-than-human material agency and multispecies communication with a "dark green" ecofeminist perspective. In *Semiosis*, humans seek a new beginning on the planet Pax, where plants are the dominant species and the selfish bamboo Stevland cultivates humans' actions for his own benefit. Likewise, Slonczewski's novel depicts a disrupted feminist ecotopia that celebrates more-than-humans and multispecies communication. Humans in this ecotopia live and die in physical discourse with their surroundings, creating and innovating alongside multispecies for survival, a form of adaptation that plants similarly express. Indeed, as Richard Karban notes, vegetal perceptions of light, chemical behaviors and communications, memory, touch, temperature, electricity and sound, and plants' ability to respond to environmental cues, as demonstrated by their growth toward light and complex chemical languages with other plants and animals, illustrate ways in which plants adapt and communicate.³ Plants establish selfhood and personhood as individuals cultivating and communicating within their own environments, evincing the same selfishness to grow and spread—or multiply—as humans. Acknowledging more-than-human selfishness and advocating for space to express selfishness promotes plants affirming selfhood as they branch out and communicate. Plants have the ability to distinguish cues from self and non-self, as they can differentiate "their own roots from those of other individuals and avoid competing with themselves by growing shorter and few roots or by growing away from other 'self' roots."⁴ As individuals, plants selfishly and critically think, plan, and create as they detect nearby harmful or beneficial organisms and negotiate further reproductive potential by tastily ripening for an animal seed-carrier or by poisoning predators. Plants' critical interpretation of their surroundings and innovative forms of communication with their physical world convey their affinity to creativity. And the implications of all of this can be seen developed in these novels.

Finally, before turning to this more recent fiction, it should quickly be noted that many of the insights of this literature and criticism—connecting the agentic capacity of plants, and therefore hereditary selfishness, with their

materially-imbedded linguistic and creative expressions—can be found already in the work of Johann Wolfgang Goethe (1749–1832), in particular in his *Metamorphosis of Plants* (1790). Here Goethe claims that plant agency unfurls and transforms through “intensification,” his term for a process which is always in motion, malleable and conversational with surrounding environments and influences. Viewed through the “dark green,” such notions of plant intensification and agentic capacity, as manifested in clever selfishness for survival and reproduction, open materially embedded chatrooms of multispecies communication between plants and anyone willing to attune their attention with more-than-human forms.

In *Semiosis*, Burke amplifies plant agentic expression and human-plant communication, anthropomorphizing the voice of the dominant species on planet Pax to narrate vegetal chemical languages and communications. Burke applies scientific findings and discussions about plant communication to emphasize animal-plant dependency for survival and ecological stability. The humans in *Semiosis* immediately face the implications of their plant dependency when they leave behind a damaged Earth (similar to the toxic, lifeless wasteland depicted in the Pixar film *Wall-E*) to forge an idyllic, ecologically embedded society on Pax. However, their foreign bodies cannot adapt and integrate in Pax ecology without artificial alteration and, inevitably, Stevland’s help. The first human narrator describes how they “suffered rashes from Pax-style poison ivies, welts from bug-lizard bites, and diarrhea until [they] artificially stimulated new digestive enzymes and [their] intestinal flora adapted,” reflecting a dependency on species aside from themselves.⁵ The humans soon learn they must communicate and negotiate with surrounding plants and animals to integrate themselves as essential players within Pax ecology. After tumultuous trials and losses, and after encountering Stevland, the humans must submit to serve him or suffer the reality of their incompetent attempt to integrate within Pax ecology, illustrating plant-dominating relationships controlling animal behavior.

Semiosis demonstrates plant-dominating relationships with animals when Octavo, a human community member who is also an Earth biologist, explains how fruit does not simply ripen but “can get ripe and then change again as the season changes,” so that “it might become better suited for a certain species of animals that can disperse the seeds more effectively, and it becomes poisonous for other animals” (16). Octavo describes a kind of control plants exert over animals by changing their type of flowering or fruit-bearing in order to control animal behavior. This “floral marketplace” consists of interactions between plants and pollinators (animals), “in which plants compete for pollinator attention and fidelity by advertising the presence of floral rewards through visual and olfactory display.”⁶ In most cases, plants dupe pollinators by

interfering with associative learning through utilizing flower polymorphism, high individual variation in scent composition, or other means such as the absence of scent.⁷ Stevland lures the humans to serve him by creating iridescent, appealing colors on his own bamboo stalks and by negotiating with the humans about creating health supplements for them, exemplifying his own prowess over the local ecology and luring the humans with his nutritious and healing fruit. Stevland directly portrays the power of ecological knowledge, as also demonstrated (for example) in Frank Herbert's *Dune*, in which knowledge about the desert planet Dune's ecology serves as the key to domination. Octavo notices how the dominant vine will only help them because he is helping himself, and therefore the humans must cooperate with the vine as if they are obedient, playful, fluffy flippokats who resemble something between a bunny and a cat on Earth. He notices how the vine "employed" flippokats to "carry away its seeds and used the dead bodies as fertilizer," germinating seeds within the dead flippokat bodies (35). Stevland wants the humans to behave and function similarly, giving him food and water while carrying his seed to further distances and offering access to their waste (latrines, irrigation, and cemetery) as fertilizer (36). This relationship begins the humans' ecological integration, and eventually, with Stevland's negotiating skills with other surrounding plant and animal life, they act as players within Pax's ecological web.

Plants create chemical compounds for communication and resistance to pests, much like animals create tools or reefs, corresponding to surrounding living and nonliving objects through volatile chemical languages (250). Plants take "active agency in their own survival and reproduction" through chemical languages shared with bacteria, fungi, and animals, linking an individual selfishness to survive and reproduce with creative modes to expend their self-interests.⁸ In *Semiosis*, Stevland expresses his own intelligence with insightful, creative, original ideas to persevere while also weighing possible courses of action to choose the best option (37). A conversation between Stevland and Tatiana, who is the commissioner of public peace in the human community on Pax, for example, illustrates language functioning as a dynamic relationship that evolves through continued use and manipulation over time. Tatiana specifically notices how Stevland uses linguistic characteristics of flattery (among other abstractions) to obtain what he wants from the humans. Stevland "had learned flattery over the years," and Tatiana understands that this presents the possibility for a sincere relationship to form between them (146). When they part ways, Tatiana wishes Stevland water and sunshine, while Stevland wishes her warmth and food. This verbal negotiation exemplifies language actively transforming for the goals and desires of different species living together on Pax. Stevland's anthropomorphized character in *Semiosis* expresses an affinity with anthropocentric linguistics through written and spoken human speech,

but without suggesting that such linguistics must exist between humans and more-than-humans if they are to express and communicate with each other. Burke's anthropomorphizing of the dominant bamboo imagines the new meanings that can emerge if humans and plants intimately converse and relate together. This is in keeping with Monica Gagliano's description of language as "a truly ecological, dynamic process of relationships" that gives rise to meanings which shape behaviors and interactions—that is, the nuances of multispecies communication.⁹ This multispecies new meaning-creating derives from "staying with the trouble," as it arises in Haraway's analysis of Vinciane Despret's work "on critters rendering each other capable of unexpected feats," and of how more-than-humans "evoke from and with each other [w]hat was truly not there before, in nature or culture."¹⁰ Humans and plants can create new meanings, new linguistic modes, to live as companion species conversing within their shared environments.

Plants express individual selfishness, but they do not typically compete in zero-sum games that wipe out all competition, leaving them "on top." In *Semiosis*, although the selfish plant Stevland possesses enough skills and knowledge to destroy whichever species hinder his survival, he thoughtfully focuses instead on ensuring the maximum amount of biodiversity, and he feels remorseful guilt whenever species are lost (308). Stevland also grapples with a temptation to consume more animal blood to rapidly evolve but remembers to converse with his environment, checking how much he is allowed to grow. He logically predicts the desolate outcome that would ensue if he gave into his temptation: "I could lure more animals for the foreigners to kill or be killed by, but when the animals are all slaughtered, including the foreigners, I would starve again" (113). Although Stevland's logic relies on self-interest, he respects the roles played by companion species within his environment and the ways in which their prosperity contributes to his own survival.

Similar respect for companion species emerges in *A Door into Ocean*. Slonczewski's novel is set on the ocean planet Shora, where human Sharers hollow out homes within giant hydroponic raft trees which grow buoyant roots deep in the water with leafy branches above.¹¹ Sharer culture exemplifies "staying with the trouble" and engages with multispecies communication, functioning within the ecological relationships of Shora. The Sharers' matriarchal, ecotopia society contrasts with the earthly Valans' patriarchal, capital- and military-driven society. Sharers live accordingly to Shora's ecological balance and their own intertwined relationship of body and environment, expressing an awareness of relationships between human bodies and more-than-human bodies. They genetically modify themselves and other living creatures through their science of "lifeshaping," thereby allowing them to use, for example, "clickflies" that spin message webs to communicate over long distances. Sharers know them-

selves “not only in the mirror of ocean, but in the mirror of every living pair of eyes” (367). Every living creature mirrors those surrounding them, not because they merely benefit each other but because they tether and web throughout each other’s existence. In Haraway’s terms, they are “in each other’s presence, or better, inside each other’s tubes, folds, and crevices, insides and outsides, and not quite either.”¹² As creatures living intimately within Shora’s ecological web, Sharers actively demonstrate their response-ability as players prioritizing ecological balance over population growth and goals for some sort of societal “progress.”

Sharers likewise recognize their response-ability in planetary cycles, shown by their relationship to sea swallows and other ocean creatures. Sea swallows are massive blue-blooded cephalopods on Shora, a unique family of sea creatures modeled on cephalopods like octopus and squid. Seaswallows evolved to an extremely large size, comparable to the great worm in Herbert’s *Dune* or the mouth of an earthly whale, swallowing anything and everything in their paths. When sea swallows gulp through the ocean every year, Sharers prepare and brace for fatal impact to their settlement rafts—as if the creatures are a natural, irrevocable storm. Sharers deliberately play their role as one of the material objects in sea swallows’ paths, knowing that sea swallows function as filters for Shora and help sustain planetary climate and population. They perceive their response-ability as players within an ecological web and choose not to radically warp the delicate planet ecology for the benefit of their own people, recognizing that changing the web would also hurt them in the end because they are part of Shora and Shora is part of them. Similar ecological logic applies to Sharers’ refusal to increase their population when given the opportunity, since this would involve altering their environment. The Valan spokesman offers to install a controlled atom-fusion energy source on Shora that would “further Sharer development” and increase their population (158), but Sharers restrain from constantly growing their population and prefer to preserve balance in Shora’s planetary ecology, assuming their own responsibility as ecologically intertwined cohabitants.

Sharers endeavor to understand material agency, rethinking their biases when overlooking the agency of “dead” matter. Material agency intertwines and converses within ecologies, much like the ways in which the aquatic plants, critters, and human Sharers in *A Door into Ocean* interact with each other, although human Sharers fail to comprehend agentic properties of “inorganic” and “lifeless” stone. Valans, whom the Sharers view as antithetical to themselves, utilize “inorganic” stone in their daily tasks, culture, and within their own bodies. Valan lifestyle parallels Earth humans’ lives today, as cyborgs culturally and physically intertwined with human-made technology. As ecologically informed members cohabiting the biodiverse web of life on Shora,

Sharers detach relations from “dead” matter like stone and affiliate death with the lifeless bodies and materials that sink to the bottom of the ocean. Only when the Sharers begin to learn material properties of stone do they regard the worldly existence of stone. Spinel, a Valan “malefreak” who integrates into Sharer society, explains to the Sharers how “dead atoms” of stone are the same as “living atoms” that made up living things, and that Shora also has stone, yet it “formed when the planet was young, when it just came from the sun and everything was liquid as water,” concluding that “stone is just as ‘alive’ as the sun is” (363). This information piques Sharers’ interest and prompts them to reconsider their misconceptions about stone. Spinel heatedly rejects the Sharers’ belief that stone comes from some sort of inconceivable “magic” and instead maintains that stone comes from hard work, from human hands shaping stone (104). Sharers struggle to conceptualize stone agency because they consider stone as dead matter that falls to the bottom of the ocean, along with all other dead life forms and objects. However, their unique language illustrates their acknowledgement and intimate relationship with every force possibly acted upon. Sharer language deconstructs polarities between subject and object, instead conflating them to evoke that every action has an equal and opposite reaction, that every action is shared among the living or nonliving beings involved. Such equalizing of subjects and objects psychologically points to Sharer’s capability to pay attention to more-than-human agencies, and more specifically, those considered nonliving. Sharers engage with stone’s material narratives, learn-sharing from Spinel about the origins of stone and its place in Valan culture. Learning the narratives and histories that shape physical materials and beings allows Sharers to conceive of unexpected material agency. Gagliano describes material narratives, more specifically vegetal material narratives, as vegetal beings’ “cultural background,” with which multispecies are capable of engaging to validate histories of injustice and trigger obligations of making kin, reversing the obtuse, irresponsible attitude of the Anthropocene.¹³ The material agencies of stone and species in *A Door into Ocean* are evoked by their interactive relationships with the physical world. Engaging with vegetal material narratives, multispecies communication acknowledges that plants have something to say and considers what plants are trying to communicate. This consideration creates space for plants to express their selfishness and prompts dialogues, forming hotbeds of discourses necessary between materially selfish human-plant relationships which also aim for kindred survival and multispecies justice. Acknowledging plant creative capacity alongside noticing plants as embodied agents encourages multispecies justice and communication.

As shown in *Semiosis* and *A Door into Ocean*, the common flesh that all more-than-humans experience shapes narratives of agency intermingling within materiality, encompassing the lateral, semiotic, and genealogical rela-

tionships and histories that material ecological longevity entails. By learning the stories and histories which more-than-humans communicate through their ecological integration (with their relationships to other plants and animals) and by paying attention to other varied forms of communication—which likely requires creative thinking, quieting down to pay attention, and engagement on our part—we create what Haraway calls an obligation for having met. An obligation for having met requires a rejection of commonplace thoughtlessness which, as shown throughout human history, functions as a pretext for injustice.¹⁴ In this regard, Haraway draws attention to Hannah Arendt's analysis of the Nazi war criminal Adolf Eichmann, whose "inability to think" reveals an underlying evil in commonplace thoughtlessness that believes the world does not matter, a mindset that does not entangle with the living and dying, therefore lacking a cultivation of response-ability.¹⁵ Likewise, the current thoughtlessness expressed in Western, patriarchal, linear model of kinship ignores and underestimates plant agency, lacking an equalizing dignity that is necessary for living and dying together as material kin.

Plants grow and express agency, simultaneously asserting their creativity and capacity for personal expression. As Serenella Iovino and Serpil Oppermann maintain, "Agency assumes many forms, all of which are characterized by an important feature: they are material, and the meanings they produce influence in various ways the existence of both human and nonhuman natures ... as a pervasive and inbuilt property of matter."¹⁶ Acknowledging plant agency opens multispecies dialogues, noticing plant creativity and advocating for creative modes of human-plant communication and kinship. Goethe refers to how a plant "refines its juices" after growing to its necessary size for flowering, concentrating energy reproductively.¹⁷ Plants and animals similarly "refine their juices," a process akin to creating art. Living beings grow and change throughout their lives in constant communication with their surroundings for survival. Plants "communicate with those microbes that allow them to forage more effectively and with animals that facilitate mating and move their seeds to locations where they are likely to thrive," exhibiting conversations among species for survival and further reproduction.¹⁸ Creativity, art, and language evoke unexpected, nonlinear qualities produced by active manipulation and expression throughout material existence. Plants grow in irregular metamorphosis, "unexpected" locations and patterns according to human perceptions of what a plant's genetic makeup entails for the course of that plant's specific life-growth trajectory, and yet this unexpected element echoes a plant's form, insofar as plants also establish and intensify their own self-form in a material existence. Plants converse with their surroundings, and their growth and transformations do not only strive toward reproductive goals entwined with the selfish ambition to live and spread seed—though the potent motivations of

reproduction certainly influence a living being's decisions. Selfishness pervades the actions of the living but so does the irrational, nonlinearity of expression through creation, art, and language. This line of thought is thus consistent with Haraway's urge for keeping with the trouble and making kin, opening a chatroom for multispecies communication.

Plants show a working model for humans to follow: how to live with a "progression and retraction" within their own environments, a material language that encompasses personhoods, or better, selfishness, of every living being.¹⁹ Like other critters, plants live a material existence full of creativity and expression. Hence Gagliano's apt question if language is "a fundamentally natural and inevitable consequence of being that emerges as an organism makes meaning of its surroundings and, in turn, engraves the very identity of that organism and its physical embodiment in its world."²⁰ Language created through dynamic relationships between more-than-humans and their environments shape new meanings for the selfish. Gagliano suggests a renewing sense of ecological intimacy with more-than-humans by visualizing an embodied concept of language that de-objectifies plants and recognizes their subjectivity, inherent worth, and dignity.²¹ More-than-humans communicate their opportunistic approaches, communicating their desires to live and what that entails for them—insisting multispecies justice that recognizes more-than-human agency. Provocative modes of language, art, and thinking encourage multispecies communication beyond anthropocentric linguistic models and beyond anthropocentric agency, coaxing out conversations of kinship between humans and more-than-humans who cohabit a shared home, and responding to plants' appetites to communicate with their surroundings.

Abigail Bowen is a senior majoring in English and Russian. She prepared this essay as part of a Mellon Summer Undergraduate Research Fellowship in the Humanities in 2019 under the direction of Professor Heather Sullivan.

NOTES

- 1 See Heather Sullivan and James Shinkle, "The Dark Green in the Early Anthropocene: Goethe's Plants in *Versuch die Metamorphose der Pflanzen zu erklären* and *Triumph der Empfindsamkeit*," *Goethe Yearbook* 26 (2019): 141–62, at 142.
- 2 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), 10.
- 3 Richard Karban, "The Language of Plant Communication (and How It Compares to Animal Communication)," in *The Language of Plants: Science, Philosophy, Literature*, ed.

- Monica Gagliano et al. (Minneapolis: University of Minnesota Press, 2017), 3–26, at 4–10.
- 4 *Ibid.*, 11.
- 5 Sue Burke, *Semiosis* (New York: Tom Doherty Associates, 2018), 20; subsequent parenthetical citations refer to this edition.
- 6 Robert Raguso and André Kessler, “Speaking in Chemical Tongues: Decoding the Language of Plant Volatiles,” in *The Language of Plants*, ed. Gagliano et al., 27–61, at 33.
- 7 *Ibid.*, 35.
- 8 *Ibid.*, 28.
- 9 Monica Gagliano, “Breaking the Silence: Green Mudras and the Faculty of Language in Plants,” in *The Language of Plants*, ed. Gagliano et al., 84–100, at 95.
- 10 Haraway, *Staying with the Trouble*, 7.
- 11 Joan Slonczewski, *A Door into Ocean* (New York: Arbor House, 1986); subsequent parenthetical citations refer to this edition.
- 12 Haraway, *Staying with the Trouble*, 98.
- 13 Gagliano, “Breaking the Silence,” 96.
- 14 Haraway, *Staying with the Trouble*, 36.
- 15 *Ibid.*
- 16 Serenella Iovino and Serpil Oppermann, “Introduction: Stories Come to Matter,” in *Material Ecocriticism*, ed. Serenella Iovino and Serpil Oppermann (Bloomington: Indiana University Press, 2014), 1–17, at 3.
- 17 See Sullivan and Shinkle, “Dark Green,” 153.
- 18 Karban, “Plant Communication,” 3.
- 19 Sullivan and Shinkle, “Dark Green,” 152.
- 20 Gagliano, “Breaking the Silence,” 94.
- 21 *Ibid.*, 95.