She Has Gone to Seed: The Ecofeminist Landscape in Richard Powers' *The Overstory*

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Abstract: Patricia Westerford prefers to talk to trees. In fact, as a child, her favourite stories were the ones where the people turned into trees. To Patricia, trees speak her language. They speak a language of escape and freedom from the boundaries of human-centered language. In The Overstory, Richard Powers suggests that the relationship between nature and humanity, while broken, is repairable by learning a new language of communication. Powers grounds this conversation with a specific character — Dr. Patricia Westerford, a dendrologist with a hearing disability — and her discoveries about communication among trees. Plant Patty becomes a bridge between a world that we think we know and reality. However, as the text suggests, we know very little. This article focuses on specific moments where Patricia transforms her communicative practices with nature in order to free herself from the confines of patriarchal scientific inquiry. The sentient nature of trees decenters the experience of the characters and places them in a landscape where they are subordinate to natural spaces. Drawing on interdisciplinary research in ecofeminism, rhetoric, and philosophy, this article argues that such transformation alters the hierarchy to create a post-anthropocentric landscape.

Keywords: ecofeminism, speculative fiction, feminism, ecoliterature, rhetoric

"Man is the symbol-using (symbol-making, symbol-misusing) animal inventor of the negative (or moralized by the negative) separated from his natural condition by instruments of his own making goaded by the spirit of hierarchy (or moved by the sense of order) and rotten with perfection."

(Burke, 1964: 507)

Beneath the tree, there are roots. We draw upon this root system as a metaphor for place — a place we claim as our own. And while the roots are an extension of the tree, they are also subject to the underneath, the soil they sink into, and most importantly, the fungi that keep them alive. We are beginning to accept that trees

speak. They communicate needs and remind us of our own inability to work together. The stories of trees shape our interpretations of earth and air, but they also tell stories of our own behaviour and miscommunication. Current environmental and literary scholarship reveres the tree for the stories it inspires. The tree has memories, histories, and a direct spiritual connection to the human race, the undeserving interpreters. The works of Suzanne Simard and Peter Wohlleben compellingly argue for the complexities and resilience of these systems, yet the tree is only able to communicate because of the fungi that inhabit it.

Trees themselves are elevated, looming over the landscape and pointing upward, very much like our own aspirations and metaphors; meanwhile concealed in their shade is the underground network upon which our great trees rest, both metaphorically and literally. As Merlin Sheldrake reminds his readers, "our perceptions work in large part by expectation" (2021: 14) and our inability to make new associations with the natural world seem to have elevated the tree in the hierarchy of our appreciation despite the other flora that keep it alive. It is in this vein that Richard Powers' novel The Overstory articulates the tension between fungi and tree; in doing so, he dismantles conventional interpretations of dominance in the forest system. As the protagonist Dr. Patricia Westerford (Patty) makes clear, the search for dominance relies on inherently masculine principles and is therefore inaccessible to those who subscribe to feminine practices of research and interpretation. The tree, in this sense, allegorises a conventionally masculine interpretation of landscapes, ignoring the network creators existing underground.

Thus, the fungal-arboreal network creates a new landscape that is only possible through dismantling hierarchies of nature and structure.

While this landscape already functions, it does so in the shadows of recognition. This mutualistic system of mushrooms — those that rely on collaboration to serve the needs of the forest — comprise a feminine speculative landscape. Landscapes are speculative when they are not recognized or wilfully ignored; as Susan Griffin notes, when man conquered land he came to know the land through domination and "because of his knowledge, this land is forever changed" (1980: 48). While the work of many ecofeminists has accurately resisted essentialist perspectives of women's relationship to the earth, the basic tenets of feminism deal with the importance of relationships. Drawing on the work of feminist writers such as Ana Tsing, Cara Daggett, and Sylvia Plath, there is precedent for discussing the mushroom's ability to reshape the movement of all bodies into a system that favours reciprocity rather than domination.

While there are complex and competing definitions of ecofeminism, the focus of this argument is informed most specifically by the work of Val Plumwood. For Plumwood, ecofeminism seeks to disrupt dualisms that exist in western thought, the most obvious being those that suggest the subservience of both women and nature (1997: 43). Movements beyond dualisms require transformation, not only of perspective, but also of labor, space, and even energy. Within The Overstory, Patty provides a bridge between the seen and unseen, the masculine and the feminine. This bridging quality is clear in Patty's scientific method and her ostracization from a male-dominated scientific community. Her subsequent suicide attempts force a transformation for Patty. In this sense, the spores of the mushroom function as seeds that encapsulate Patty's memories of oppression. Not only are the seeds embedded with that feminine power,

but it is the mycorrhizal network that makes Patty's transformation possible. Furthermore, reshaping these relationships creates space for trans-species communication with an emphasis on listening rather than speaking. As a result, Powers' text embraces alternative ecofeminist interpretations of natural spaces, forces transformation, and suggests that movements from anthropocentrism towards biocentrism enclose the only viable future landscape.

Plant Patty

This ecofeminist ethos is foremost evident in Powers' characterisation of one of the novel's principal protagonists. From childhood, Patricia Westerford has been ostracized for her differences. She is born with a hearing impairment that not only limits her ability to listen, but also to speak clearly. Although she is eventually fitted with technology to help her hear, she has at this point already been shaped by silence. Although Patty herself does not, others take issue with her struggles, and hence, as her story begins there is a consistent separation between Patty and the other human beings she encounters. Human being is a significant term here, and as the novel progresses, since Patty ascribes personhood to more than human entities. While she is bullied by her schoolmates for how she looks and speaks, she feels that "acorn people are so much more forgiving" (Powers, 2019: 142). Patty constructs beings made of twigs, leaves, and other natural elements into the confidants and schoolmates of her childhood. When they break or begin to disintegrate, she buries them in the garden so that they can transform into something new. Fittingly, Ovid's prototypical story of transformation becomes the motivation for Patty's movements through life. At the outset of her story, Patty fervently believes that transforming into something new is always a possibility for herself too.

Much of Patty's education takes place at the hands of her father — an agriculture extension agent — during his journeys through a post-war landscape. In conjunction with the education on trees that her father provides, Patty is further tied to the stories in Ovid's poem:

The stories are odd and fluid, as old as humankind. They're somehow familiar, as if she were born knowing them. The fables seem to be less about people turning into other living things than about other living things somehow reabsorbing, at the moment of greatest danger, the wildness inside people that never really went away. By now, Patricia's body is well along its own tortured metamorphosis into something she in no way wants. The new flare to her chest and hips, the start of a patch between her legs turns her, too, halfway into a more ancient beast (147).

In particular, Patty notes the ability of Ovid's characters to move through and beyond their form. These stories subsequently allow her to access a part of herself that is unbound, and this is how she redefines metamorphosis; it is less about moving from one fixed form to another, and instead about finding a way to live without boundaries. However, there is a marked distinction for Patty. She cannot transform herself, as she is bound by the limits of her human, female form. It is solely her moment of puberty that turns her not into a wildness "that never really went away," and instead into a "more ancient beast."

Her educational journey is also notable. Since she is an outcast from the start, her father notes that the time he spends with her will be the best education she can receive. Powers

subsequently creates a touching narrative of father-daughter relationships through Patty's childhood as she accompanies him while he works and teaches her the scientific names of flora and fauna. She benefits from his scientific knowledge while also immersing herself in the natural spaces. While this alternative educational journey is primarily presented as a hopeful escape from a childhood of mockery, it also situates her knowledge via layers of removal from human community, and filters it through her father's own ecological lens. Her father's interest clearly evidences a thoroughgoing care for his daughter, but this same notion of care ultimately limits Patty's experience of transformation. There is a marked difference between her father's willingness to teach her rigid disciplinary nomenclatures and the continued return to the wildness evoked by the fables of Ovid. Such a transformation is inaccessible to her father, drawing upon a pervasive tension in the episteme of naturalism; whether scientific or experiential knowledge leads to the most complete understanding of natural spaces. When Patty's father gifted her Ovid's Metamorphoses, he inadvertently reinscribed that same tension across Patty's future.

As Patty matures, her only companions are her father and her acorn friends. She decides to attend college and study trees, certain that her unique perspective will be valued, yet even in the erudite space of academia she does not find her place. Her female roommates do not find her potted plant collection odd in itself, but they openly scoff at her insistence on labelling each species. Nevertheless, Patty herself cannot access a completely scientific understanding of her plants, since she insists on naming even plants that are solely decorative. As she moves to graduate school, she becomes enthralled with pursuing the story of trees within laboratory

work. For a moment, Patty rests satisfied in the world of academia, certain she has found her place. It is not until she encounters the limits of scientific knowledge that she returns to a place of loneliness. While in forestry school, she notices that all of her male fellow graduate students are insistent on increasing production in an efficiency-oriented manner that holds no regard for the complexities of tree systems. Despite these revelations, she mistakenly believes that if she continues to follow her own path of enquiry, then others will see the error of their ways.

At first, Patty's divergent research is motivated by her gut feeling that trees communicate; her reliance on this element of intuition fast becomes a characteristic that separates her from her peers. She is certain "on no evidence whatsoever that trees are social creatures," and that "motionless things that grow in mass mixed communities must have evolved ways to synchronize with one another" (153-154). Her advisor insists that the trajectory of her dissertation is a waste of time, but she persists regardless. With some luck and a lot of patience, Patty eventually succeeds and becomes Dr. Westerford. As a result of having followed her own path, her dissertation formulates a significant, but easily ignored revelation about tulips. In the hopes that she can now begin working undisturbed by anthropocentric pressures, she further pursues teaching and research, proceeding to both make her most significant discovery, and precipitate her removal from the scientific community. Based on a series of trials conducted over the course of several seasons, she is able to prove not only that trees communicate, but also that they function as a community. Knowing her work will be heavily scrutinized, she writes up the report in the sobering, scientific language accepted in her field. She makes no mention of the sentient nature of the trees except for one word, "community" (158). The article is picked up and published by a prominent journal, and she is asked to speak at a conference. However, right before this invited speech a response to her article by a group of leading male scientists is published, which mocks and demeans her discovery. These scientists insist that "her methods are flawed and her statistics problematic," and that "Patricia Westerford displays an almost embarrassing misunderstanding of the units of natural selection" (159). After these critics, who pointedly leave the 'Dr.' out of her name, question her work, so does the scientific community. Her teaching position is not renewed, and she is laughed out of academia as the woman who "thinks that trees are intelligent" (160).

Rotten with Perfection

Citing a passage from The Overstory in an interview, Powers notes that since humans are afflicted with "Adam's curse" (Powers, 2018: 13:55; Powers 2019: 143), we are unable to see anything outside of ourselves. If external phenomena do not mimic our image, they do not elicit the same level of implied agency or importance. Powers' recontextualizing of this oft-discussed concept as specifically "Adam," reliant on the subordination of the "Eve," is a fervent reminder that the woman likewise inhabits a form of invisibility in his novel. Here the work of literary theorist Kenneth Burke provides insight for Patty's limitations. As Burke notes in his essay "The Definition of Man" (1964), humans rely on symbols communicate and create meaning. He articulates this via the story of a bird stuck in a room, which repeatedly attempts to fly up instead of out through an open window. Had we been able to speak to the bird, we could have

shown it the way out; it is the limitations of language that confine the bird to struggle.

Burke subsequently notes that whilst man is a "symbol-using" animal, he regularly misuses those symbols (Burke, 1964: 495). The reliance on symbols invents the negative, yet as Burke notes "there are no negatives in nature, and [therefore] this ingenious addition to the universe is solely a product of human symbolsystems" (1964: 498). It is worth noting that the binarism created by Burke's logic here reinforces the divide not only between human and more than human entities, but also essentialises many dominant and subordinate positions that exist between men and women. Regardless, Burke's work does not expressly speak to misogynistic principles, and the presence of such binarisms in his writing can be seen to encourage "the social critic to engage in active incongruity as the tool for unearthing comic complexities" (Goltz, 2007). In line with Burke's highlighting of the binaries that exist because of language, especially in respect of dominant narratives, Patty's scientific work, while brilliant, defies the categories of discovery allowed by her male counterparts. Her critics struggle with the emerging narrative Patty proposes; trees are not simply objects for scientific enquiry, but beings capable of protecting each other which display agency, intention and care.

It is tempting to consider the trees she studies as a direct metaphor for Patty; they are similarly misunderstood and only considered for their utility. Nevertheless, it is not the leaves or the trunk that enable the tree to speak. It is the disruption of the hegemonic scientific paradigms, and the associated threat to hierarchy, that terrifies her critics and motivates their dissolution of her findings. Limitations are coded by a symbol system dominated by a masculine perception of order and nature. Here then, Burke's systematization functions

as a warning; if we idealize any entity, we miss out on the actual reality of its substance. In his earlier work A Grammar of Motives (1945), Burke notes that "there are very fatal moments in human decision that radically alter our notions of purpose precisely because the role of the future is allowed to usurp the role of the present" (Burke, 1969: 333). The inability of her male critics to upend their binaries is that "fatal moment" for Dr. Patricia Westerford, and it is here that she begins her transformation. Recounting Ovid once again, Patty muses that his "fables seem to be less about people turning into other living things than about other living things somehow reabsorbing, at the moment of greatest danger, the wildness inside people that never really went away" (147). This reabsorption does not remove the past action, or the trauma, but speaks to the memories inherent in transformation.

Transformation and Energy

Patty's relationship with her father provided her with access to a different type of knowledge, but it ultimately generates a confining narrative of its own. There is science, and then there is the almost-science that continues to predominate her research. This same dualism between science and not-science necessitates an ethos of interdisciplinarity in many works of ecofeminism, and Patty's story is no different. The antagonism that has existed between women and scientific inquiry is fostered by patriarchal approaches that aim to reduce understanding to binaries and dismiss the experiential work of ecofeminism. As the entry "Ecofeminism - Historic and International Evolution" in The Encyclopedia of Religion and Nature notes, the "reductionist models of both Western theologies and many Western scientific ideologies project a material

world that is not sacred, but mechanistic" (Hobgood-Oster, 2005: 535). As Patty's research progresses, there is a further tension between the story of science and the fables from Ovid that shapes her perspectives:

She loves best the stories where people change into trees. Daphne, transformed into a bay laurel just before Apollo can catch and harm her. The women killers of Orpheus, held fast by the earth, watching their toes turn into roots and their legs into woody trunks. She reads of the boy Cyparisus, whom Apollo converts into a cypress so that he might grieve forever for his slain pet deer. The girl turns beet-, cherry-, apple-red at the story of Myrrha, changed into a myrtle after creeping into her father's bed. And she cries at that steadfast couple, Baucis and Philemon, spending the centuries together as oak and linden, their reward for taking in strangers who turned out to be gods. (147-148)

Each of the figures in these stories is ostracized from the world they have known, before being gifted with a transformation that leads them to a different community. This movement reshapes their future, and by application, underscores Patty's own desire to transform into something new. Each of these transformations comprises a movement of energy from a situation bound by convention to one fixed in community. Simply stated, turning into a tree provides you with roots that you did not have before; bodies are newly fixed to a network that shares the burden of survival. At the end of each transformation the labours are complete, not because no more work takes place, but because the work is shared so that the burden is not too heavy for any one specimen.

Powers makes clear, As however, these alternatives do not exist within the anthropocentric spaces Patty inhabits. Her physical body also represents disruptions to the narrative of anthropocentrism; she consistently confronts the problem of synecdoche through her work and the perspectives that oppose her research. Aside from constant reminders of her limitations as a female — only one part of her wholeness — her hearing impairment hinders her ability to participate fully in conversations. As a result of Patty's refusal to deny tree communication and her pursuance of the ethics of care suggested by her research, she is placed into a category of other types of scientific inquiry that do not acquiesce to the dominant narrative of natural selection. Yet, Powers suggests that her movement toward wholeness resembles what occurs in the underground; mycorrhizal networks reshape the underground, the surface, and the overstory alike. It is no coincidence then, that Patty's rebirth and transformation happen at the space where the underground meets the surface; she must kill the parts of herself that are separate in order to access a narrative of wholeness. Through her transformations, she removes herself from the dualisms that confine her in the scientific community where she has been forced to consider science as removed from experience. By ending that part of herself, she is able to access a new form of inquiry tied to the communal movements of the mycorrhizal network.

Trees Stand Tall

During one of the initial chapters of her book *Finding the Mother Tree* (2021), the scientist Suzanne Simard recounts her attempt to identify the basis of plant communication in the early 1980s. She is sure they are speaking

— she just knows it. At first, she is unsure how this phenomenon is taking place, yet she soon discovers that there is a complex system in the roots of trees, empowered by fungi. Simard continually references her isolation in the woods, wishing that she "had someone to talk to out here in the forest, to debate my growing sense that the fungus might be a trustworthy helper" (2021: 19). While there appears little debate that Dr. Westerford's story is loosely based on the life and work of Suzanne Simard, Simard does not self-present as a feminist scientist aiming to change the perspectives of her male counterparts in her own narrative. However, her discussion of numerous hostile interactions with the patriarchal practices of scientific inquiry and policy strongly suggest that she is no stranger to the movements against her work.

Just like Dr. Westerford, Simard does not subscribe to the simplistic binaries that science presumes, and moves instead towards the intuitive and the personal. One chapter, "Miss Birch," presents itself as a tongue-in-cheek story of the opposition Simard faced when presenting her groundbreaking, and now widely accepted, research. During one fateful moment, Simard is encircled by a group of scientists — all male — who demand an explanation of her findings. Simard recounts that she "opened [her] mouth, but no words came out" (2021: 206), a close analogue to the moments where Dr. Westerford struggles to present at the conference following the backlash to her article. Garrett Stewart notes in his own discussion of Patty's story that her "incipient speech seems to have authorized in advance the novel's own most intimate summons of vegetal density [...] in a more deeply probed metalinguistics linked to tree 'signals'" (2021: 168). Hence, Patty's story serves as a metaphor for the agency of the tree and the woman that studies it.

In addition to the silence imposed on both scientists, there is a compelling argument against the noise of the scientific community. Criticism reverberates and is not easily dispelled, even when unjustly given. In the same interaction with these same scientists, who circle around Simard "nearer than the wolves," Simard remembers "the criticisms doused on women behind their backs, even if said in jest, [that] always burned [her] ears" (2021: 206). Relatedly, Simard reminisces about her grandmother, recalling that she "was quiet, but in large part her resorting to silences to avoid barbs was likely because it was — easier. I'd vowed not to provoke the criticisms of the men, and yet here I was" (2021: 206). Silence is loud for those that are being silenced, and this is even more the case for Dr. Westerford, who consistently struggles with her hearing aids and the volume of the speaking world, causing her ears to "howl with feedback" (127). As for Simard, the antagonistic scientists become wolves, howling.

These wolves are defenders of the original tree interpretation; trees, for these men, stand alone with roots to give them life. While there is nothing in the work of Simard or Dr. Westerford that suggests trees do not hold intrinsic value and deserve our praise and protection, they both note that the tree, while it stands tall, does not stand alone; there is an entire forest under our feet. The dominant scientific narrative regarding trees meanwhile, has relied upon the masculine paradigm of separation, an interpretation which has motivated scientific inquiry for some time. It is not surprising, perhaps, that many cling to this notion in spite of Simard's discovery that trees speak as mushrooms assist and empower their communication. One of Simard's early works — completed with other researchers in the forests of British Columbia — establishes the necessary role of fungi in the forest system. Noting the essential contributions of fungi to tree growth, Simard here suggests that mature trees make the choice to hold onto diverse mycorrhizal communities until favourable conditions for growth are present (Wiensczyk, 2002: 5). These fungi grow beneath the trees and enable them to reach their full height. The fungi make choices, and display care for their kin. Here, the line between reality and fiction becomes translucent; if trees are dependent upon mycorrhizal networks, what sort of landscape remains? Newly envisaged, landscape is fundamentally based on community and network.

This method has been often characterized as feminine, whilst movement toward this epistemology suggests that envisioning a communal landscape is the best path toward preservation and conservation. Of course, the search for objectivity and the debate over scientific inquiry has been taken up by many scholars, most notably Donna Haraway who reminds readers of the situated nature of knowledge, something she discusses in terms of scientific inquiry. Likewise, Janet Kourany, in recounting some of the history of Standpoint theory, recounts that scientific inquiry was limited without such female voices as recently as the late twentieth century (2009: 211-212). Despite recent correctives, this limitation persists in scientific inquiry, which often still discounts experiential knowledge. While these questions of knowing are essential to the future of women in scientific fields, Patty's story highlights possibilities rather than arguing for prescriptive solutions.

Previous scholarship on Powers' novel illuminates a potential landscape where land and people thrive together, but tends to narrowly focus on one that assigns an agency to trees — which again assigns dominance over humans

and more than human entities alike. As Monica Manolescu suggests, "trees represent the apex of natural life forms and the consummation of their own lives, giving meaning to all other concerns" (2021). In this sense, the tree situates the perspectives and futures of the human race, rather than the other way around. Manolescu's reading is not only accurate, but also highlights the notion that trees are the representation of all natural spaces. Viewing The Overstory holistically, this is fair. Manolescu's reading footnotes the limitation of this tree-centric perspective, suggesting that the "trees are very often rhizomatic and it can be argued that the oversimplified opposition tree/rhizome does not function in The Overstory" (2021). Yet, through a close textual analysis of Patty's story, it is clear that these trees are granted their sentient powers through the fungi.

Mushrooms

writer CMarie Fuhrman and considers the frailty of her own position as both a human and a woman in a changing, often hostile landscape, noting that we "die so many times in one life," and questioning how "many times can we die in one life and still breathe?" (2022: 210). It is on similar grounds that Patty's transformation, through death, begins. Following her dismissal from her teaching position, and whilst unable to find a place in any lab, Patty spends her time working as a substitute teacher, using her spare time to walk through the forest. She continues in this manner for around six months, uncertain of her path. However, whilst walking one day she discovers some "unexpanded caps of Amanita

bisporigera under a stand of oak" (161).1 It is not a stretch to see this description as Patty's recognition that her own life and her work have been prematurely diminished, before she has even had time to release her spores into the world. While it is tempting to envision spores purely in reproductive terms, Patty's story suggests diverse interpretations. Powers' presentation of her sexuality, mimicking the wildness of beasts during puberty, suggests that there is an inherent conflict within Patty as a feminine figure. Her stunted progress relates not only to her scientific career, but also speaks directly to the limitations that have been placed upon her by those who cannot define nature in anything other than binary terms. The knowledge, or spores, that Patty aims to release seek to upend conventional interpretations of hierarchy, reminding the tree that it depends on the fungi for its sentience, with mushrooms comprising the agency by which any tree survives and thrives.

It is also significant that the mushrooms Patty finds, like many others, have grown at the foot of an oak. The masculine tree stands tall, and yet fungi do not require trees, despite trees requiring mushrooms. Again, the interconnections between trees and fungi suggest a metaphorical relationship between the masculine, hierarchical interpretation of nature and the more feminine, mutualistic perspective. Patty's relationship to mushrooms reminds her that she is tethered to the tree of established science, and that she must both nurture that tree and assist it in communication. Yet, these particular mushrooms are incredibly poisonous, and often referred to as Destroying Angels. Often confused by amateurs as a safe mushroom

¹ Here, it is crucial to note that when a mushroom is described as "unexpanded", this term means that it has not fully developed the fruiting body. Simply put, it is still growing, and not yet able to release spores. Spores are both the beginning and the end of the mushroom life cycle (Sayner, 2021: online), hence, unexpanded mushrooms, when picked, have their life cycle cut short.

to pick and ingest, they are deadly within minutes. The unassuming think nothing more of the fungi and consume it, to their peril; Patty knows this and quickly fills her mushroom bag, stunting the fungi in their growth process.

Soon afterwards, Patty commits to ending her life by cooking a feast of chicken and the deadly mushrooms. Despite knowing that many will mock her ostensible mistake in accidentally picking and consuming Amanita bisporigera, she cannot fathom another path forward. To Patty, the mushrooms have come to function as a sign of her own opportunity, cut short by the folly of patriarchal structures. When her meal is ready, she notices that it "smells like health itself" (161); there is an obvious dichotomy between the description and the substance of the fungi. How can something that causes death disguise itself as life? Yes, the consumption of the mushroom is death, but its scent is life. Patty begins to consider then the differences between consumption and mutualistic, reciprocal relationships. There are marked trappings of domesticity in her attempt at suicide; she has confined herself to the subordinate role of a failed, woman scientist who has nothing left to do but delicately end her life in a kitchen of confinement. The mushrooms were extracted before they could flourish, and are now to be consumed; her planned suicide is an act of dominance over nature. But the scent changes everything. Smelling the "health" of the mushroom shifts her perspective. Patty is mesmerized by the aroma: "Something stops her. Signals flood her muscles, finer than any words. Not this. Come with. Fear nothing" (161).

In this moment, she is breathing in transformation as the scent reshapes her understanding of her relationship to fungi and scientific knowledge. There is a noted difference between the smell of an organism and the scent of air; the scent of an organism, a mushroom, a

tree, an animal, is the first point of encounter with the other. Anna Tsing articulates this link between scent and transformation:

> Smell is elusive. Its effects surprise us. We don't know how to put much about smell into words, even when our reactions are strong and certain. Humans breathe and smell in the same intake of air, and describing smell seems almost as difficult as describing air. But smell, unlike air, is a sign of the presence of another, to which we are already responding. Response always takes us somewhere new; we are not quite ourselves any more — or at least the selves we were, but rather ourselves in encounter with another. Encounters are, by their nature, indeterminate; we are unpredictably transformed. Might smell, in its confusing mix of elusiveness and certainty, be a useful guide to the indeterminacy of encounter? (Tsing, 2015:46)

Patty's encounter with poison threatens to end a life without the possibility of transformation. Yet their scent reorients her towards a space where she can reinvent her life. Both Patty and the uncapped mushrooms are caught in a moment of movement, working alongside energies of life and death to produce an indeterminate, speculative future where transformation is possible, not simply through death, but through meaningful encounters with other life. Tsing's formulation of new space relies on a recognition of the other and a response to that other, yet up to this point, Patty has not responded. She has mused on and envied the story of the mushrooms, but she has been attempting to respond within the purview of the human voices and expectations that aim to limit her. Tsing's reference to sameness, that we smell the same air, likewise suggests a shared

burden of the toxicity present within that air, one that we do not recognise until we are transformed by a scent leading to a "confusing mix" (2015: 46).

That "[s]omething" is also reminiscent of the moments when Patty has felt the benefit of communities built in natural spaces. The use of the plural in the "[s]ignals" sent to Patty through the aroma remind her that she is not alone. While such is not explicitly expressed in Powers' text, mushrooms have long been a representation of the feminine. In Sylvia Plath's poem "Mushrooms," she laments that women are forced to blossom in darkness. Utilising the metaphor of the mushroom, she comments on women's possibility of advancement in the thrall of a world intent to quash their possibilities. Plath notes that "Our toes, our noses / Take hold on the loam, / Acquire the air. / Nobody sees us, / Stops us, betrays us; / The small grains make room" (Plath, 2020: ll. 4-9). It is "noses" that need the air, the smell of possibility; mushrooms need the air, not to begin life, but to thrive and actualise their potential. And yet, even though mushrooms are mutualistic, they are forced to push their way forward in order to release their spores. As Plath notes, "Nudgers and shovers / In spite of ourselves. / Our kind multiplies" (2020: ll. 28-30). Plath's "In spite of" further implies that this movement toward dominance and competition is not an inherent quality, but one born of desperation. Mimicking the relationship between mushrooms and air, Plath highlights the desperation of those seeking opportunity and a voice. Patty, meanwhile, struggles with her voice, not only because of her hearing impairment, but also because she is not able to communicate with her peers in a way that is seen as scientific. Her voice accordingly leans toward experiential rather than scientific tones.

This conflict in scientific enquiry has well-established historical roots. According to Barbara Gates and Ann Shteir, prior to the late nineteenth century, and throughout the early twentieth century, women began to participate in scientific inquiry by serving as illustrators. Eventually, women aimed to move forward from their position as "helpers" and illustrators, to become scientists themselves, whose discoveries and insights might be taken seriously by their male counterparts (Gates, 1997: 12-13). The work of the early mycologist Mary Elizabeth Banning, for instance, is now revered not only for her illustrations of fungi, but also for her detailed documentation of their stories (Banning, 2019). Although women and fungi have been linked in both literature and science, their position has been largely determined by men. Patty's suicide attempt and subsequent refusal to follow through reaffirm that she is intractably linked with these fungi in the quest for recognition and value. When she hears their voices, she changes her mind. She laments the "animal fear" (161) that almost allowed her to end her life. The wolves were circling Patty to the extent that she became fixated on her limitations, but the mushrooms, the Destroying Angels, reminded her of her potential to transform and transcend.

Mushroom Seeds and the Rhizosphere

We anthropomorphize because we are desperate to figure out who we are. How is it that other beings — the blade of grass, or the fox — seem to persist far better than our own species? Even Ovid's considerations in *Metamorphoses* rely on human transformation in order to enact change. Patty's career resurges following her rebirth, and she becomes a relatively successful researcher and speaker. Later, she makes a

second attempt to end her life. However, this second attempt is figured quite different from the first, and speaks to a future of branches and networks rather than hierarchy. The networks created by mushrooms are tangible; as Merlin Sheldrake, in his work Entangled Life articulates, these networks are "the difference between having twenty acquaintances and having twenty acquaintances [that share] a circulatory system" (2021: 151). These networks are based and rely on a mutualistic relationship and cannot function without each other. Simard's research likewise foregrounds the importance of the mother tree. Mother trees are older, well-established trees that share genes with all of the younger trees around them. They send nutrients to the young trees, and as Simard suggests, accordingly transfer "memories" and tools for the future (2021: 190). This process of transfer is empowered by the fungi which comprise what is commonly referred to as the Wood Wide Web. Mother trees age and die, but before they go, the trees send the last of their strength, knowledge, and memory to the other trees. Yet, as liveable conditions continue to deteriorate and extractive capitalism persists, more mother trees and their knowledge are dying. Simard wonders what future exists when the last mother tree falls (2021: 184-186).

The successful albeit disheartened Dr. Westerford takes up this question. As she plans her keynote address, she has determined that she will end her life in front of the audience. Despite her research and publications, nobody seems to be concerned about the crumbling networks of the forest; Ryan Hediger underscores this paired conflict by noting that "human death and tree death run parallel through the novel" (Hediger, 2021: 215). As she stands in front of the room with her glass of poison in hand, Powers presents two alternative conclusions to her portion of the novel's plot. The first is that

she drinks, dies, and shocks the room full of spectators, exclaiming "To Tachigali versicolor" (583). In the second, Patty instead throws the solution onto her audience, screaming "Here's to unsuicide" (583). At first, it is difficult to determine which path she has in fact chosen. This blurring of reality is a ubiquitous move in much of Powers' work, and we here see Patty choose for a second time to save her life by choosing a branch that ends in an activist statement. Hediger aptly describes this moment as one which presents "narratives of ways out of crisis," noting that the "ecological crisis is partly narrative crisis" (2021: 216). Of course then, Patty's second suicide story has two branches, like a tree. What if, however, it branches instead like a mycorrhizal network?

Patty's story imagines a future that is possible, although seemingly improbable. Yet, returning to the inspiration for her story in Suzanne Simard hints at an answer: "What the trees were conveying made sense. Over millions of years, they'd evolved for survival, built relationships with their mutualists and competitors, and they were integrated with their partners in one system" (2021: 254). There is a give and take between unlike species that does not disregard difference, but benefits from the biodiversity. Patty's final thought in the book is her father's voice in her head, at the moment of her second attempt to seek death, reading Ovid's "Let me sing to you now, about how people turn into other things" (583). It is the transformation between mother trees and those that surround them that teach an important lesson. Proximity matters; while these trees show preference for their kin, they do not neglect those that are unlike themselves, and persist to develop communities that thrive on mutualism. Future landscapes depend on the reorientation of the human to the more than human. Powers grounds this recognition deeply

in the contributions of his female scientist who refuses to see a difference between fact and relationship.

Fungi have seeds, but they function distinctly. Called spores, these "seeds" are really millions of microscopic spores produced when the mushroom cap is able to fully open and mature. Each of Patty's transformations allow her to emerge as a new version of herself, one that is less concerned with limitations, and more concerned with the ability to make new connections between the fungal community she knows and the human community that limits her. Adam Grener notes that if "The Overstory is a novel that endeavors to extend the temporal and representational scales of realism in order to confront the Anthropocene, it is also one that foregrounds the central role stories play in shaping the way we inhabit the world" (2020: 57). There is a space under any tree where roots work with the soil to provide nutrients. This narrow space, called the rhizosphere, is a site of intermingling between fungi, soil, and the root system. A unique aspect of the rhizosphere that poses a "procedural difficulty" for scientists is that it is difficult to know which fungi are constant in that space and which are present only for a short period of time, to aid in nutrition (Burnett, 1968: 330). The rhizosphere is a place of constant movement and transformation, allowing fungi and soil to be other things. The future, as Powers' novel suggests, builds upon this movement toward a mutualistic future, in order to emphasise that landscapes rely on what happens below the surface.

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