

Spores of Mycelial Nature: A Tale of Radical Mycology for Ecocritical Education

John Lupinacci¹

[Article copies available for a fee from *The Transformative Studies Institute*. E-mail address: journal@transformativestudies.org Website: <http://www.transformativestudies.org> ©2023 by *The Transformative Studies Institute*. All rights reserved.]

KEYWORDS: Mycelium, Radical Mycology, Ecojustice, Ecocritical, Critical Pedagogies.

Responding to the interrelated exploitations of both humans and more-than-humans brought to attention and action by a global pandemic and the Black Lives Matter protests that for good reason has made demands of not only scholars and educators but specifically for all hands on deck to get behind real change by any means necessary and do it now, this article addresses a call, and collegial invitation for education scholars to abandon our familiar thoughts toward possibilities that lurk in shadows cast by decades of education research. In the book *Outsider Theory: Intellectual Histories of Unorthodox Ideas*, Eburne (2018) explores the concept of “outsider” in literature culture and makes the argument that while outsiders are often seen in as figures marginalized, they can also be seen as powerful agents of change who challenge dominant narratives and even offer alternate perspectives and ways of thinking. Akin to this idea of looking toward the outsider in this article I am sharing how I am looking to the fringes of scientific knowledge and to the illusive and unknown behaviors of fungi and mycelial networks by opening up to the idea of learning from and with diverse multispecies stakeholders in education and what such consideration means for a pedagogical practice in solidarity with radically reimagining education. While mushrooms are the familiar

¹ **John Lupinacci** teaches pre-service teachers and graduate students in the Cultural Studies and Social Thought in Education (CSSTE) program at Washington State University. He uses an approach that advocates for the development of scholar-activist educators. His research focuses on how people, specifically educators, learn to both identify and examine destructive habits of modern human culture.

and like many fringe characters and ideas are consumed by and at markets of neoliberal fashions, the fungi story is that of an outsider—a story that metaphorically and in consumption physically offers a way of rethinking the role of the outsider in society and challenge the traditional conceptions of identity and understanding in education.

More specifically in this article, I draw from how working within an ecocritical framework in curriculum studies research (Lupinacci et. al. 2018; 2022) offers openings for radically considering what might be considered absurd collaborations with more-than-human life (rats, ants, and fungal spores) as integral in addressing the dangers of Western industrial models of schooling, human supremacy, and more broadly environmental degradation and social injustice. Drawing on an ecocritical framework, this article focusses more on bringing to that work lessons from Radical Mycology (McCoy 2018; SLF, 2009). The effort here is not to propose something new but rather to find inspiration and learning that come from outside the dominant cannon of education research and in doing so pushes us, education scholars, to think differently than we might usually when approaching the work I am regularly doing to rethinking responses and (re)authoring human subjectivities while recognizing and resisting the problematics of the culturally constructed and dominant neoliberal human supremacist subjectivities.

DEPARTING FROM THE (RE)AUTHORING OF EDUCATIONAL TEXTS

When I began learning from education scholars two decades ago, I was a high school math teacher in Detroit interested in teaching mathematics for social and environmental justice and it was my goal to learn from how contemporary scholars were thinking about educational change—and how they were connecting that associated thinking with writing and teaching. What I was really was in search of were people to connect with and learn from—and preferably that they be scholars who held contempt for conventions of the institution but that also studied the classics closely and unapologetically loved literature, fiction and the humanities. I was drawn toward ideas that presented mystery and in association for the epistemology of the origins of such ideas and I grew an affinity for the ideas that lived in the shadows, in the fringe.

This article which is really a small tale from a larger ongoing work to spark utopian projects and ignite fires within our hearts to delve deep into the realm of both the metaphorical and material role that fringe ideas play in our society, our work, our lives. Such a tale is merely but a story set

within the boundaries of educational discourses familiar to critical scholars but with a twist that invites readers to imagine futures where we—education researchers—let go of the conventions of our work in efforts to escape the trappings of subjectivities bound to technologies of the current socio-political regimes of a technocratic authoritarian human and corporate rule.

This story stays in bounds but lives on the edges of departing from the usual with hopes of jumping off into a wider world of subaltern systems of wisdom and knowing—one of thinking about how a radical mycelial framework might illuminate particular things about our humanness and ecological existence and intelligence while bringing a necessary humility to the hubris of neoliberal human subjectivities. DeLeon (2019) in *Subjectivities, Identities, and Education after Neoliberalism: Rising from the Rubble* asks the question:

What happens when humanity has the ability to embrace change, to begin once more, with the walls and temples now destroyed? What happens when we abandon the logics of empirical science to combine an academic voice with fictional future telling that says goodbye to a dying world? (p. ix)

In the middle to later part of the 16th century, Linnaeus (1765/2015) founded a Latin binomial naming system *Systema Naturae* still in use today. Frustrated by the vast and chaotic diversity of fungi, he banished the diversity of fungal groups to the homogenizing category he called *Chaos fungorum*. He sent that shit to the fringes. Drawing on that notion of the diverse ideas and the monoculturalized ways of understanding our human species in relationship to one another and the ecologies of our worlds I approach this current project through the metaphor of mycelia networks inspired by DeLeon's declaration of his long dead body "returned to the terrestrial worms to breathe new life back into the mycelium" (p. ix).

Today we—our bodies—exist in a world with an estimated 15 million known species existing on Earth, 6 million of these may be fungus and of these 6 million only around 75,000—or 1.5% of all fungi—have been classified. Fungi while wildly diverse get grouped into one category and their diverse contributions backgrounded, ignored, and devoured still mostly know for their culinary contributions or psychedelic providings. While mycologists estimate about 6 million different fungi, only a few are studied, and even less cultivated into production with only around two dozen commonly grown and of that only seven species grown on a mass

scale (Hawksworth, 2009). This to me resonated strongly with projects I have been doing to learn to recognize, resist, and (re)author human subjectivities and push to move beyond the monocultural ways in which we apply a limited understanding of ourselves and our worlds to our work.

In this wandering through mycelial musings, I'll overview three main points that stayed with me and how I see them presenting questions for us as scholars in education. The first point, is the importance of taking a different look at neoliberalism and more specifically neoliberal human supremacist subjectivities. The second, the need for those different looks, or examinations, to depart from the typical and move outside of "reality," practicality, and the expected. And the third, how such projects emerge from and with the creative and generative possibilities of the imagination and a new world or pluralistic future—towards a multispecies framework for education scholars interested in social justice and sustainability.

The first of those points sets up what I will call the safety lines that make it possible to go into the second and third points. Let's start the project drawing on a cannon of critical thought from scholars astutely identifying the complex ways that neoliberalism—a set of ideas, beliefs, policies, and practices that Harvey (2005) I think succinctly defined: "proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets and free trade" (p.5). As a foundations scholar I'm always looking for scholarship addressing how we might learn to teach and engage in research in ways that confronts neoliberalism, David Hursh (2016) suggests that when confronted with such giants as neoliberalism and the free market agendas of multi-national corporations educators, researchers and especially teacher educators, consider "new ways of thinking about the relationship between one another and to the environment" (p. 25). Following Hursh's suggestion and welcoming DeLeon's (2019) invitation to an academic tale, I believe it's important in working toward a multispecies framework for curriculum studies that such a project sets out to share the "new ways" that discourses of neoliberalism work to constitute illusive subjectivities with very explicit outcomes.

Reflecting on the desires for a future constituted via the trappings of current predicaments of what DeLeon (2019) refers to as "neoliberal fantasies" which results in the normalization of a conservative imagination that forces upon many of us (let's be real most of us) that: "The subjectivity of our sense of self must be overcome through a ruthless practice of ambition that pushes us towards an abusive relationship in which our economic livelihood hold more sway than an ability to create a more just

and equitable world” (p. 20). DeLeon asserts that there is a ruthless recuperative nature of neoliberal subjectivities via a vicious repetitious network of enclosures that I often refer to in my work as the cultural roots of Western industrial culture. Yet, I wonder how might our work present as DeLeon (2019) wrote “an ode to a future that is still yet to materialize.” (p. 17) and so such a project cannot stay in the examination of what is but before unapologetically moving onto dreams of what ought to be it is important to detail the insidious ways that visions of a good society through neoliberal subjectivities fail to learn from outsiders and in such failures obscures that dominant understandings of current good societies are of a world that must die before it stops taking the lives of all those in its wake. Furthermore, critiquing neoliberal subjectivities as recuperative networks of enclosures, DeLeon wrote that neoliberal subjectivities have set this world into ruin and to think outside of those ruins as scholars we need to sift through the rubble and pull metaphors from archives of creative and often occult work that is important to note as actually not new but that have been marginalized to the point of near extinction in many Western industrial communities or commodified in the recuperative processes of the neoliberal regimes. In moving from the importance of the need for a different kind of critical examination of neoliberal subjectivities and the material destruction of such habits and norms.

INSIDER/OUTSIDER – ECOCRITICAL FRAMEWORKS IN EDUCATION/RADICAL MYCOLOGY

In this part of the story or brief academic tale of An Ecocritical Framework meets Radical Mycology and the Spore Liberation Front, I bring toward the center of the discussion within an ecocritical framework the outsider theory of radical mycology. Over the past decade or so, I have been working with an umbrella framework, ecocritical, which works to:

1. examine Western industrial culture and its impacts on social and environmental systems;
2. examine the links and interrelations between prevalent value-hierarchical dualisms, and how superior/inferior dualisms intertwine with either/or thinking, which ultimately contributes to inequities such as racism, classism, sexism, ableism, anthropocentrism, and so on; and
3. examine and identify how to teach or share skills and habits of mind that support socially just and environmentally sustainable communities. (Lupinacci, et. al 2018)

In addition to a continuing to work on ecocritical pedagogies through and ecocritical framework, in this project I am bringing into the ecocritical conversation the work of radical mycologist Peter McCoy and of the Spore Liberation Front in order to interrogate how such philosophical discourses might produce and germinate ideas and projects when we start to open up the assumptions that surround and uphold commonsensical understandings of being human and learning from and with mycelium both materially and metaphorically.

Radical mycology is a movement—or maybe better described as a framework—that seeks to promote the understanding and study of the use of fungi for ecological restoration, food sovereignty, and community resilience for both humans and the more-than-human world. Peter McCoy (2016) in the book *Radical Mycology: A Treatise on Seeing and Working with Fungi*, shares how radical mycology presents a holistic approach to the study of, and living with, fungi that emphasizes the importance of understanding the interconnectedness of all living systems and the critical role that fungi play in sustaining life on Earth. McCoy (2016) defines radical mycology:

Radical Mycology: 1.) A social philosophy that describes cultural phenomena through a framework inspired by the unique qualities of fungal biology and ecology. 2) A myco-centric analysis of ecological relationships. 3.) A grassroots movement that produces and distributes accessible mycological and fungal cultivation information to enhance the resilience of humans, their societies, and the environments they touch. (p. vii)

Radical mycology encompasses a range of shared knowledge and practices including edible and medicinal mushrooms, using fungi for remediation. It also covers exploring the cultural and spiritual significance of fungi and beyond being a resource for both what fungi can do and how to cultivate mycelium the framework interprets fungal intelligence through a socio-political framework that suggests that fungi teach us from the soils and rotting logs outside of the purview of what is often seen as a source of knowledge. If this story is one of introducing the outsider, a character there all along but too often ignores, than radical mycology is the outsider to an ecocritical tale in education. A fundamental premise in both diverse ecocritical perspectives in education and in radical mycology is that all life is interconnected. McCoy (2016) reminds us: “Through the mycelial lens, the haste of modern human life slows...working with fungi is not a new chapter in the human story, but an ancient relationship woven into our

foods, medicines, and customs. They are the world's greatest and oldest teachers, timelessly spawning a wisdom that can just as readily uplift habitats as unite community. (p. xv) Radical mycology presents both a vast set of practical skills while also offering lessons toward a mycocentric approach to social change through three main pillars: 1.) education and awareness building around important issues; resisting, slowing, and stopping the ineffective or disastrous social systems; and designing functional and appropriate alternative systems. Thus, radical mycology is a movement guided by a solutions-based approach fit for prefigurative politics and the utopian desires of ecocritical scholars and educators for multispecies equity, social justice, and environmental sustainability,

Taking such an approach seriously in educational research and in particular curriculum studies and teacher education, I am curious of how a mycelial tale of the details of neoliberalism illuminates for us hope and action for us to relearn what we know abandon the structures of the current epoch and move onto something else a decomposing of the ideas that got us here and rotten into education that invites diverse ways we reimagine and radically reshape how we do education in support of Earth Democracies and radically imagining relationships friendships, mutual aid, consensus decision-making and multispecies equity bioregional beyond the confines of human supremacist subjectivities (Edwards-Schuth & Lupinacci, 2021; Shiva, 2005). Asserting fundamentally that the idea of the being human, organizing via a nation-state and how we too often teach about life and living is organized as a structure of human supremacy and in need of change.

Enter the Spore Liberation Front (SLF)—the active network of radical mycology. The SLF is a decentralized network of individuals and groups who share a passion for fungi and seek to promote the use of fungi for remediation, food, medicine, ceremonial purposes and most of all for social change through actively aiding in community building toward resilient communities liberated from destructive political regimes. SLF is guided by the principles of radical mycology and follows a mycelial network model, akin to anarchism, with no formal organization without any central leadership or social hierarchy. Instead, it is a network of individuals and groups who share a commitment to working with, and learning from, fungi. Additionally, the members of the SLF commit to cultivating and promoting the use of fungi for positive social and environmental change. The SLF (2009) identify as:

..the hidden network beneath the duff, fusing filaments of thought to create fruitbodies of change...we are the filters of a diseased and

radiated culture and the decomposers of its classist, spiritually stifled, and oppressive society... we are the destroyers of already dead ideologies... the creators of soil most fertile from which relentless synergies form, habits of mutual aid take over, and respect for all that lives persists and is never forgotten. (p. 34).

While the SLF promote directly turning our attention to physically cultivating fungi and the diverse uses of fungi for community empowerment they also see the lifecycle and intelligence of fungi as a metaphor for the way humans can choose to interact in and with the natural environment. This direct action group while akin to anarchic groups like the Earth Liberation Front (ELF) and the Animal Liberation Front (ALF) differ in that they exist working directly to liberate spores of fungi that are far often less at odds with laws of social governments and do not interfere with massive farming and agriculture or animal labor and entertainment industries the ways that the ELF and ALF have. The SLF is truly in the fringe, an outsider organization working beneath the top soils of social activism playing the long game but taking direct action to promote how crucial mushrooms—more specifically fungi broadly—are in teaching us how to literally rebuild from the destruction of current societies through leading by doing the work as outsiders hidden from the lens of current human focus.

Now more than ever, educators need to engage in pedagogies that encourage recognition of (and resistance to) all forms of domination. Doing so furthers the potential of fostering spaces of learning together to recognize harmful assumptions and actions that undergird social and ecological injustice. I admire, value, and firmly support a shared commitment to respond to the undeniable atrocities that we—as humans—enact on one another. But I also believe that these atrocities are inextricably connected to the cruelties we've normalized and perpetuate against non-human animals and the environment. None of these atrocities occur in isolation; they are all interconnected.

An ecocritical framework, like radical mycology, isn't new or distinctly stemming from one critical framework but rather a multitude of perspectives, and none of which are new and many of which calls for what many diverse Indigenous cultures globally have as a fundamental understanding of self in relationship to community and have been teaching for centuries. Interrogating neoliberal human supremacist subjectivities and thinking through and with diverse critical scholarship doing the same, in sum I can say this work is aimed at exposing how Western industrial cultures deeply entrenched in patriarchal, white, and human supremacism

combine with hyper-capitalism and ableist heteronormative individualism to constitute deeply problematic relationships among humans and between the human and the more-than-human world furthermore normalizing limitations of what is possible beyond such confines. Breaking those assumptions and reauthoring our understandings of ourselves, our actions, and our futures I believe requires more than the conventions of the cannon even the critical cannon.

If we do not rethink the cultural framework rooted deeply in our language, by which dominant meanings are socially constructed, we are destined to re-create and perpetuate many of the problematic relationships that we, as radical educators, often set out to change. While I find some radical hope in some of the fringe work like radical mycology (McCoy, 2016; SLF, 2009) and wisdom of tree intelligence (Powers, 2018; Wohlleben, 2016) I cannot emphasize enough that this much happen in tandem with listening to and learning from social movements and the activists like the leaders of the Black Lives Matter movement, The Women's Revolution in Rojava (ICoR, 2019; Strangers in a Tangled Wilderness, 2020), or Water Protectors on occupied Indigenous and First Nation territories. For example the work from Alexis Pauline Gumb's (2020) *Undrowned Black Feminist Lessons from Marine Mammals*. We must also take some actual steps in our studies and enactments of pedagogies in our classrooms toward cultural change. It is an unapologetic pedagogy of democratization, reconciliation, and community expanded beyond the human species.

OUTSIDER MYCELIAL ACTIONS & INQUIRES: TOWARD PEDAGOGIES OF DIVERSE BIOREGIONS

Concluding, I want to share a few points of action in education and questions that emerged from a mycelial tale that wanders through an ecocritical framework to resituate what I think this kind of lens and project offers scholar-activists and educators. I think first and foremost for me at this moment, I am lured toward a closer study of fringe and even esoteric knowledges and in particular noticing that like the Chaos fungorum had in many ways marginalized fungi to a homogenous classification that outsider knowledges and educational projects on the fringes bear striking similarities as cast away and homogenized as primitive, savage, dangerous, trouble...etc. Similarly, thought to be sparks of revolt and rebellion like how it might well be that a fugal infestation on rye in France helped be a catalyst for peasant uprising or how spores of liberatory nature share hope that among the many often gone unnoticed ideas might very

well be guidance towards different future. How might there be a multitude of spores from the fringe shadow work of the Spore Liberation Front that shape directions and directives in education? Maybe our histories fail to see the role of these mysterious spores, like we—the scholars in educational studies—are trapped in neoliberal subjectivities fail often to find value in creative projects, imaginary departures from practicality. I wonder what might happen if we moved away from “What do we do in schools today and tomorrow?” and more toward imagining they were gone and we worked from the rubble and mire in the rot of decomposition to feel, smell, see a different way of learning to be together on planet and then coming back to the uncertainty of what that might scholarship in the foundations look like in ways that refuse the (re)authoring of the same texts, curricula, etc. Turning attention to such spore ideas I draw from a project called pedagogies of diverse bioregions—educational projects that are anarchically situational, local, and directly in support of the interconnectedness of living systems (Edwards-Schuth & Lupinacci, 2021).

Pedagogies of diverse bioregions, like the work of the SLF and called for in a radical mycology framework brought into an ecocritical framework, require a fluidity of learning and doing in both the material and the cultural. For example, recognizing and protecting local watersheds from profit margins (see Elwha Dam Indigenous protests); engaging in guerilla gardening (Reynolds 2014) to circumvent private property and food deserts toward food sovereignty; or the work of the SLF as they educate, cultivate, and put to work and consume fungi—these are just some examples of engaging in pedagogies of diverse bioregions. As educators and scholars, we can begin to challenge oppressive cultural discourses in our classrooms utilizing fungi as esoteric and ancient teachers. Following such a tale, I share ways in which we might begin to utilize an ecocritical framework acknowledging radical mycology toward diverse pedagogies of bioregions in our local learning communities.

First, engage in learning that explore diverse projects to rethink the dominant assumptions influencing how we, as humans, construct meaning and thus learn to relate to each other and the more-than-human world. Like the SLF and in accordance with lessons from radical mycology educators can and arguably must make the commitment to critically and ethically examine how, as teachers, we individually and collectively understand educating, organizing, and taking action toward supporting healthy communities that include all beings. We have no good reason to continue to ignore the vast network of labor and knowledge at work in the natural world and understanding such turn our attention to fungi. We must

acknowledge the intrinsic value of recognizing, respecting, and representing the right of all beings to belong to and live peacefully within an ecological system. For example, we should critically engage in questioning how we language our world asking: *What does it mean to refer to fungi as only food or drug or as “natural resources?” What does it look like to advocate for the diverse species of our bioregions and in doing so acknowledge and value fungi and fungal networks? What language and lessons from fungi help us to better understand and address social inequalities and the increased undermining human rights in our communities?*

In connection with this first assertion and action, we must also think about how we might frame lessons that include ecocritical questions that disrupt dominant worldview assumptions: *What does it mean to be human beings in our diverse communities of life? Who/what benefits and who/what suffers? How are learning relationships in our classrooms influenced by value-hierarchies and cultural assumptions? What does it mean to teach toward the abolition of superior/inferior (either/or) thinking and move toward networks of solidarity, interdependence and mutual aid? What would it look like to make decisions together in community that are in support of challenging human supremacy and include examples of alternative? How can challenging human supremacy also be an act of anti-racist and radical teaching?*

Next, engage in critical and ethical examinations of community as we come to learn about and live with diverse species in our bioregions. As notions of community are all too often constructed in terms of white supremacy, patriarchy, and human-centered exclusion, it is important to reconsider community based on who and what is included in its definition and how it contributes to either supporting or undermining the right of all beings to coexist in peace. Positing questions like: *Who and what might we be ignoring when we think about who is considered in decisions in our neighborhood community? What animals, plants, and fungi live and make homes in our community, and how are we interrelated to them? What are we doing to practice reciprocity with our diverse human and more-than-human neighbors? How might we learn more about our diverse communities through fungal networks?*

As educators, we can work with students to learn deeply about the local fungal networks and to imagine how decisions might be made that consider more broadly diverse voices, ideas, abilities, and experiences away from the historical dominance of white male colonial voices and in favor of learning from how fungal networks function as channels of communication. We should aim at engaging students in listening and being

responsive to diverse language systems like breathing, smelling, listening to sounds, seeing gestures, and recognizing the diverse weather, climate, water, soils, birds, insects, fungi, forests, and other mammals and animals in our bioregions that move beyond simply the spoken or written word. Specifically, we ought to work towards identifying—or seeking out—a more-than-human teacher in our specific bioregion (something/one to learn from and intentionally engage in a learning relationship) like for example mycelium. At first, this is just about making a commitment to learning from this different kind of teacher–student relationship in a way that interrupts habits and assumptions of anthropocentrism and human-supremacy. Identify and engage with local fungi, study and share experiences about what is learned from and learned from local fungi. Doing this includes and commits to learning about the ways in which oppressed communities have suffered and survived the extreme violence of white-male heteronormativity and to not reproducing or existing in complicity with these atrocities.

Additionally, engage in examining community in terms of inclusion by recognizing, respecting, and finding diverse ways in which learning and taking action among all members represent diverse cultures and species in support of a system of interconnected and interdependent diverse bioregions. Specifically, this includes recognizing the role activist networks, both human like the SLF and more-than-human like the actual fungal networks, play in alleviating and eliminating unjust suffering in our communities, by also building networks of solidarity with these organizations. Asking questions like: *How can single-issue or locally focused social justice groups make alliances with other social and/or environmental justice groups? How can we as educators connect with and start conversations between these kinds of organizations, our classrooms, and communities? And furthermore, how can these conversations include diverse species like fungal networks?*

For example, in our communities, we can ask what commonalities and bridges there might be between fungal networks, the SLF, Water protectors, ANTIFA, Planned Parenthood, the Black Lives Matter movement, the Sierra Club, the Human Society, and the World Wildlife Fund... to name a few. This type of questioning starts with learning about who is already having these conversations and how to support their attempts. Additionally, working to put to work what we learn from acknowledging such conversations and work in all facets of education to encourage collaboration rather than competition, for example by focusing lessons on fostering and developing skills of community collaboration rooted in mutual aid and interdependence that mimic the work of fungal

networks. School and community gardens can be a site of such teaching and learning, so can science and humanities lessons that center mushrooms and the role of the vast diversity of mycelium in sustaining and supporting socially just communities. Asking: *How might we learn to teach from the viral social media lesson part of the Black Lives Matter at Schools resources? How might we bring those lessons into connection with a prefigurative political project inspired by both BLM and SLF work? What might it be like to teach or be a student working to learn with and from diverse cultures and species and what might we learn about other movements in different places that help us locally to resist the antidemocratic violence often coupled with nation-state identities?*

Building on these first two shared actions and their associated inquiries, engage in supporting the diverse approaches to taking up resistance, healing, and remediation from Western industrial culture and, in solidarity, show respect for epistemologies that differ from the current dominant discourses of Western industrial culture. Following the prompt to engage in prefigurative political projects inspired by learning from and with fungi educators doing this work must support the ways in which diverse forms of resistance challenge dominant structures and practices assumed to be essential for societies like hierarchical governance, prisons, civilization, capitalism and the limitless extraction of so-called resources. For example, explore how local groups in the community are fighting against past and present acts of colonization. Imagine how educators might teach lessons that question progress rooted in colonization, hyper-consumerism, and global market ideology. For example, for explore students can explore the economics of barter and trade in efforts to make explicit that economic systems do not need to be rooted in capitalism, or have students identify non-monetized activities that exist in the community like the kind of reciprocity offered by fungal networks and in learning such explore how humans might give back to such labor. Additionally, students could explore the speciesist, racial, and gendered dimensions of non-monetized care work and how, along with commitments to antiracism, decolonization and feminism, it upholds and strengthens communities and democratic possibilities bioregionally.

Above all, and in addition to the attempts to disrupt institutionalized Western industrial culture that is perpetuated through and within educational spaces, following these few points shared it is imperative educators also commit to the daily effort of turning our attention to learning toward the local and fostering critical friendships with other humans and the more-than-human world and seeing potential and power in the outsider practice of centering fungal networks in learning to do such.

As part of building such radical friendships, such projects advocate for us to stop seeing things in the problematic paradigm of good/bad, right/wrong, friend/foe and engage with adversaries and allies alike, sharing stories of hope and resilience—of possibilities, capacities, and potentialities while critiquing local and international relations of domination and hierarchies pervasive in human communities steeped in the ills of Western industrial colonial cultures. In such volatile, authoritarian times, it is important that critical educators challenge dominant perceptions of what currently constitutes schooling, education, and knowledge and the assertion here in this article is that outsider theories, knowledges and lessons can help us depart from such habits. Collectively, we must imagine with open hearts and minds what is possible when we commit to learning to be members of bioregional networks of interconnected life and embrace the messy uncomfortable task of learning to be humble in the wake of so much human destruction and turn our attention to wisdom from the fringe and outside of our species and dominant culture for working locally and in support of living systems.

Concluding, I pose the question: What do you see and feel emerging or lurking in the fringes for the future of education and society? And rather than find answers in familiar tales looking to the fringe, the shadows, to the outsiders and asking oneself: *Where do you see remediating, reauthoring, and resistance work rotting, festering, healing, transforming, budding, ground swelling?*

REFERENCES

- DeLeon, A. (2019). Subjectivities, identities, and education after neoliberalism: Rising from the rubble (Vol. 41). Routledge.
- Eburne, J. (2018). *Outsider Theory: Intellectual Histories of Unorthodox Ideas*. University of Minnesota Press.
- Edwards-Schuth, B. & Lupinacci, J. (2021). Pedagogies of Diverse Bioregions: An Ecotistical Move from Ego to Eco. *EuropeNow* 45.
- Gumbs, A. P. (2020) *Undrowned: Black Feminist Lessons from Marine Mammals*. AK Press.
- Harvey D. (2005). *Neoliberalism: A brief history*. Oxford University Press
- Hawksworth, D. (2009). Mycology: A neglected megascience. In M. Rai & P. Bridge (Eds.), *Applied Mycology*. (pp 1-16). CABI
- Hursh D (2016) *The End of Public Schools: The Corporate Reform Agenda to Privatize Education*. Routledge.
- International Commune of Rojava (ICoR) (2019). *Make Rojava Green Again*. Dog Section Press.

- Linnaeus, C. (1735/1964). *Systema Naturae*. Brill Dutch Classics
- Lupinacci, J., Happel-Parkins, A., & Turner, R. (2022). *Ecocritical Perspectives in Teacher Education*. Brill.
- Lupinacci, J. Happel-Parkins, A. & Turner, R. (2018). Ecocritical scholarship toward social justice and sustainability in teacher education. *Issues in Teacher Education*. 27(2) 3-16.
- McCoy, P. (2018) *Radical Mycology: A Treatise on Seeing & Working with Fungi*. Chthaeus Press.
- Powers, R. (2018). *The overstory: A novel*. WW Norton & Company.
- Reynolds, R. (2014) *On guerrilla gardening: A handbook for gardening without boundaries*. Bloomsbury Publishing.
- Spore Liberation Front (2009). *Radical Mycology: An SLF primer*. Riseup.net.
- Strangers in a Tangled Wilderness. (2016). *A Small Key Can Open a Large Door: The Rojava Revolution. Strangers in a tangled wilderness*.
- Wohlleben, P. (2016). *The hidden life of trees: What they feel, how they communicate—Discoveries from a secret world* (Vol. 1). Greystone Books.