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## BECOMING FUNGAL: HUMANS AND MUSHROOMS AT THE 2018 RADICAL MYCOLOGY CONVERGENCE

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Oliver Hillenkamp  
Department of Anthropology  
Reed College  
Portland, OR 97202  
HILLENKO@REED.EDU

### ABSTRACT

Drawing on ethnographic fieldwork and the work of Joanna Steinhardt, this paper explores the relationship between fungi and humans in the DIY mycology movement. While taking seriously the transformative potential of interspecies engagement, Hillenkamp analyses the community of the 2018 Radical Mycology Convergence with an eye towards forms of mutual relationality. Resisting oversimplified readings of anthropomorphism as unidirectional projection, the paper argues for the equal metamorphic potential of a “mycomorphism.”

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I stood on the hillocked ground of a large permaculture ranch a half-hour drive south of Portland, watching six lined-up people and one flute do their best to take on the traits of a cosmic, transpersonally manifesting mushroom goddess. Arms rose and fell in staccato, legs jiggled, and the flute piped out a mysterious, meandering tootle as one of the humans pressed it to his lips. The six idiosyncratically aligned people spoke in rounds, delivering a message to a future earth from the mushrooms, who have long since spread beyond this damaged planet to the farthest reaches of the solar system. “Individual autonomy is a myth,” they intoned. “Spores have no borders, and mycelium knows it’s a network. Heed our message.”<sup>1</sup> With this warning against human hubris, the mushroom goddess dissolved back into its constituents, becoming again part of the thirty or so earth-tone wearing, smiling folks applauding around me.

The impromptu performance had been concocted minutes earlier, as part of a workshop during the 2018 Radical Mycology Convergence (RMC), which I was attending more out of a personal curiosity and interest in mushrooms—and mushroom lovers—than any background in mycology. The biennial mushroom-themed festival in Mulino, OR

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1. Mycelium is the “root” system of mushrooms, a vast underground meshwork of one cell-thick filaments that contains the majority of the fungi’s biomass, can spread thousands of acres through the soil, and can live thousands of years. What is called the mushroom is only a very small part (the fruiting body) of the larger organism of the mycelium. This is not an exact quote, but I came across versions of this sentiment multiple times during the convergence.

brought together mycologists, mushroom growers, ecological artists, activists, and general mushroom nerds in a three-day meeting of grassroots science, creativity, and playful bizarreness. There were workshops and talks on every possible facet of mycology and mushroom-inspired culture. These included an exposition of fungi's practical use in ecological problems such as oil spills (mycoremediation), a philosophy talk about Plato's ingestion of psilocybin via the Eleusinian Mysteries and its influence on his thinking, an alchemical exploration linking the traditional seven celestial wanderers with various mushroom species, and the world's first MycoHack: a cultivation-focused brainstorming session where novice and experienced growers came together in an open forum to share designs and methodologies for the most effective ways to grow mushrooms. The RMC also sported a bounty of mushroom-inspired art, music, and theater. The mushroom-goddess performance described at the beginning of this essay came about during a workshop where participants were asked to collaboratively invent mushroomy characters to populate a post-apocalyptic Earth where fungi have taken over. The three days of workshops, talks, performances, and installations gave me a taste-tester of the grassroots scientific and cultural movement that is DIY (do-it-yourself) mycology, a diverse conglomeration of mushroom-lovers with roots in North American ecology movements and the psychedelic underground.<sup>2,3</sup> The RMC intrigued me as a perfect place to ponder the relationship between mycologically-minded folks and the Kingdom—or rather Queendom (the term used by the Radical Mycologists) of fungi.

In this essay, I will make the argument that mushrooms impart knowledge, inspire imaginations and animate the structure of the DIY mycology movement itself. The influences of fungi on humans extend far beyond interactions with the physical organisms of mushrooms themselves to include psychological, social, and even spiritual dimensions, as in the example of the futuristic mushroom-goddess with which I began.<sup>4</sup> I take seriously—while also not downplaying their playful nature—common ways of speaking in the DIY mycology world that refer to fungi as teachers, as sources of a “mycelial message,” and as powerful “allies” in the creation of new human-ecological paradigms. Exemplary of the DIY mycology ethos, the mushroom-centric activities at the RMC involved both humans and fungi in transformative engagements.

For example, a workshop on mushroom dyes began with a long period of conscious reflection on the mushrooms about to be boiled, which stimulated a shift towards a respectful attitude among many of the workshop-goers, as noted during conversation afterwards. The physical matter of the dried mushrooms changed form in response to humans, but couldn't we say that the humans themselves also changed by allowing the material presence of the mushrooms to occupy their attention? The human-fungal engagements at the RMC were metamorphic in this sense and others, transforming material forms, modes of attention, and social configurations through often experimental or playful encounters. Mushrooms could impart knowledge, in addition to being the object of such knowledge; mushrooms could inspire games and stories, in addition to being used in them as symbols or metaphors; and mushrooms, with their uniquely decentralized biological form (mycelium), could animate the very metaphors that Radical Mycologists use to imagine themselves as a collective, in addition to being personified as “allies” to that collective. This essay describes these interrelatings through my observations at the RMC, with a focus on the nondirectional, mutually metamorphic effects of human-fungal engagement. On a related note, I discuss the potential and drawbacks of the concept of anthropomorphism. In the conclusion, I consider how the practices of DIY mycology could point towards a more enlivened or animistic attunement between humans and the more-than-human world.

Interspecies relationality is at the core of DIY mycology. In her doctoral dissertation on DIY mycologists, based on over two years of fieldwork with members of this scientific subculture as well as attending events similar to the RMC, the anthropologist Joanna Steinhardt shows that DIY mycology constitutes what she calls an “undisciplined science” in which the wonder and enthusiasm of interspecies engagement remain central to the practice, rather than purified out of it, as they would be in normative institutionalized science.<sup>5</sup> Emerging from the criminalized psychedelic underground of psilocybin mushroom-growing as well as the amateur naturalist tradition of mushroom collecting, DIY mycology retains the excitement and mystique of these activities. Steinhardt notes animistic language referring to “fungal wisdom” and the idea of a “fungal alliance” throughout her fieldwork, as well as depictions of the technical practice of cultivating and applying mushrooms as a form of intersubjective relationship.<sup>6</sup> DIY mycology takes

2. Joanna Steinhardt, “Mycelium Is the Message: Open Science, Ecological Values, and Alternative Futures with Do-It-Yourself Mycologists” (Ph.D. Dissertation, University of California, 2018).

3. Radical Mycology is the Pacific Northwest manifestation of the larger, global (but west-coast based) movement of DIY mycology.

4. The mushroom goddess was obviously more a playful characterization than an earnest expression of spirituality, but accounts of life-changing psilocybin trips should be enough to provide a reasonable argument for the spiritual potential of mushrooms.

5. Steinhardt, “Mycelium Is the Message: Open Science, Ecological Values, and Alternative Futures with Do-It-Yourself Mycologists.”

6. *Ibid.*, 413-4.

a critical stance on the ontological claims underlying modern institutionalized science and industrial capitalism, which both take a mechanistic view of nature that denies sentience to nonhuman beings. Steinhardt argues that in contrast to these paradigms, DIY mycology “coopts technoscientific practices to build material and political capacity,” providing a unique way to productively engage with fungi for the purpose of “extending and empowering the human-fungal ‘collaboration’.”<sup>7</sup> These practices operate athwart ontological distinctions between nature and culture, foregrounding relationality by reimagining “nature” as a diverse array of living agents and cultivating a culture that “follow[s] the shape of fungal life—as fungal life follows human activity.”<sup>8</sup>

As a microcosm of the DIY mycology world, the Radical Mycology Convergence reflected the general characteristics of interspecies relationality described by Steinhardt, while also giving me the opportunity to ask specific questions about the bemushroomed activities I observed and participated in. At the RMC, the moments I found most interesting were when fungi emerged as co-participants in knowledge production, story-telling, and social organization that affected both human and fungal worlds.

The keynote presentation of the convergence, delivered by Peter McCoy, the founder of Radical Mycology, was entitled “Liberation Mycology.” The talk drew analogies between fungal spores and mycological ideas, calling for the “liberation” of “repressed” knowledge—both practical cultivation techniques and respectful attitudes and modes of engagement—through non-commercialized information and skill sharing. As McCoy explained to the crowd a few hundred-strong scattered around the nighttime forest stage, working outside of the mechanistic paradigms of institutionalized business and science means relating to the fungi with respect and encouraging human-fungal interaction through grassroots organizing. Liberation mycology is more than a science; it means engaging with fungi as teachers and working to “spread the spores” of mycological knowledge to more and more people. “Fungi fit into everything,” McCoy proclaimed. “They have the potential to completely transform your life.”

For McCoy, liberation mycology means that mycological knowledge is not just about fungi, but also for them (“For the Fungi” is a common DIY mycology slogan). Steinhardt’s argument seems relevant here: that for DIY mycologists, fungi are a “tangible exploration of ethical and existential questions about how to live with other kinds of beings.”<sup>9</sup> Liberation mycology has the potential to be an ethical practice, but one that involves the flourishing of non-humans alongside humans. More to the point of my argument about co-creation of knowledge, McCoy’s metaphor, “spread the spores,” symbolizes the spread of DIY mycology through reference to the organism’s own reproductive process, reminiscent of the anthropologist of science Natasha Myers’ observation that scientific engagement with nonhuman species changes “not only what practitioners come to feel and know, but the very meanings of the concepts and metaphors they set in motion to story nonhuman worlds.”<sup>10</sup> Mushroom biology animates the discourse around mycological ideas. In addition to spores, mycelium was frequently brought up metaphorically during the RMC, for example in the phrase “the mycelium is the message” and in the usage of the verb: “to mycelium” into something, meaning to fuse one’s thoughts or imagination with the larger group consciousness. Radical Mycologists conceive of themselves as members of a mycelial network, a collective of like-minded individuals that advocate the proper use of mycological knowledge.

On the first day of the RMC, I participated in a natural dyeing workshop, referenced above, where we learned how to use turkey tail mushrooms to dye our own fabric. To start off, a big basket and a vial with a dropper went around the circle of participants. Everyone ingested a couple drops of turkey tail extract and received a quarter-sized piece of the dried ‘shroom. Then, we were instructed to go off by ourselves and find a quiet spot where we could sit, just the mushroom and us, and give it our attention—how we did so was our decision. I sat for twenty-five minutes with my small bit of turkey tail, then returned to drop it in the boiling pot of water with the other pieces that would become the dye. As the concoction simmered, the leader of the workshop told us the story of finding the mushrooms: she was contemplating which mushroom to use as the main ingredient in the dye for the workshop when a posse of turkeys ran across the road in front of her. After seeing the turkeys, she went for a walk in the woods and right away discovered a dead oak tree completely covered in old turkey tail mushrooms. She took this as signifying the mushrooms speaking to her and choosing to be a part of the dye.

Without trying to prove or disclaim the possibility of fungi communicating with humans, the respect that fungi inspire is clear to me, in this case as resources for dye. In casual conversation after the workshop, a few people noted that the simple act of slowing down to appreciate the actual mushrooms that were being used for our project had

7. Steinhardt, “Mycelium Is the Message: Open Science, Ecological Values, and Alternative Futures with Do-It-Yourself Mycologists,” 418-9.

8. *Ibid.*, 417.

9. *Ibid.*, 425.

10. Natasha Myers, “Becoming Sensor in Sentient Worlds: A More-than-Natural History of a Black Oak Savannah,” in *Between Matter and Method: Encounters In Anthropology and Art*, ed. Gretchen Bakke and Marina Peterson (London: Bloomsbury, 2018), 76.

provoked a shift in attitude. After the meditation session and the foraging story, the mushrooms had gone from being just materials to being part of another being that had actively chosen to participate in the workshop with us. This raises interesting questions about anthropomorphism, which I return to below. Regardless of how willing one is to accept the possibly New Age-tinted attribution of human-interpretable speech to mushrooms, the fungi clearly did noticeably transform the modes of attention of some of the humans, even as the physical mushrooms themselves boiled away in the process of becoming dye.

Besides many other educational and entertainment-oriented workshops, visual and performative art proliferated. A mushroom-themed gallery opening on the first night displayed miniature sculptures where mushrooms grew alongside human lips on stalks, three-dimensional embroidered and crocheted pieces which mimicked real fungal forms, and a wall-length painting of a post-civilization gathering of a huge raven surrounded by humanoid fungal entities. A clever collagist had grafted photos of various mushroom caps onto pairs of jeans legs arranged in a circle and titled the piece *Fairy Ring*. One piece was called *I left you a map, below and above ground*, with an exit from capitalism and was a drawing of overlapping strands of mycelium with instructions to ponder ways various characteristics of fungi, such as their decentralized form and remediative potential, could apply to one's own life and help one to think beyond capitalist systems.

It turned out that many of the mycophiles at the convergence had heart-felt, if not well-polished, performances to share. A mushroom-themed talent show on the second night included acoustic ballads about mushroom foraging, spoken word poems about mycelial cosmology, and collective sound emanations from the merged voices of the audience. One person stepped silently onto the mid-forest stage with a loop of string around both hands and proceeded to make an array of figures with the white, entangled string: a moving set of parallel lines, a three-dimensional polyhedron, and a decidedly human form with arms and legs. The night closed with dreamy, otherworldly performances from two bands and the joyously destructive sporulation of a mushroom-shaped piñata. But even once the music had ended, a fire burned into the early morning hours where people talked over songs and whiskey about anything fungi-affiliated.

One criticism that could be raised to the visual art and performative activities that I have just described, as well as the argument I make in the first part of the essay, is that these mushroom-obsessed people were just anthropomorphizing. The mushrooms couldn't really be speaking to them, incentivizing them to spread knowledge, or giving them tips for a post-capitalist future because at the end of the day, weren't the humans simply projecting all of that onto their fungal friends? In the remainder of this essay, I attempt to argue against that line of questioning, drawing on recent anthropological theory as well as philosophy that acknowledges the human place within a sentient, more-than-human world.

Defined in traditional anthropology as well as colloquially as the ascription of human traits, emotions, or intentions to nonhuman entities, the label of anthropomorphism is often used condescendingly to pooh-pooh the naivety of unscientific "primitive beliefs," or more common recently, "bad science" that understands its "objects" through the lens of human characteristics.<sup>11</sup> From this angle, anthropomorphism is solely projection. The equivalence of anthropomorphism with human projection of meaning onto nonhumans gains its salience by way of assumptions that underlie most modern scientific (and nonscientific) attitudes and have legacies going back at least as far as the Enlightenment: that humans are self-contained subjects with the ability to act on an inert world of nonhuman objects, that meaning comes only from humans, and that encounters between humans and nonhumans can work "in one direction."<sup>12</sup> The idea of anthropomorphic projection only makes sense in a flawed schema where humans mistakenly imbue meaning in nonhuman objects—in this case, mushrooms.

This is only half of the story of anthropomorphism. Acknowledging the other half necessitates recognizing nonhumans as potentially agentive, meaningful, and capable of transforming humans, just as much as being transformed by them. It means entertaining the possibility that mushrooms can be allies and the mycelium can embody a message, and that one really can be infected by Radical Mycology "spores," although not necessarily in the simplistic, intentional ways that some of the comments in the above descriptions suppose. As Myers suggests, "what we have long called anthropomorphism doesn't appear to work in one direction."<sup>13</sup> What if, for mycophiles at the RMC, anthropomorphism's complement is mycomorphism: the metamorphic potential of mushrooms themselves? In fact, that is the very conclusion that Steinhardt comes to in her analysis of the obsessive character of many practitioners,

11. Leesa Fawcett, "Anthropomorphism: In the Web of Culture," *Undercurrents* 1, no. 1 (1989): 14–20; Natasha Myers, "Conversations on Plant Sensing: Notes from the Field," *NatureCulture* 3 (2015): 35–66.

12. Donna Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (Chicago: Prickly Paradigm Press, 2003); Tim Ingold, "Two Reflections on Ecological Knowledge," in *Nature Knowledge: Ethnoscience, Cognition, and Utility* (New York: Berghahn Books, 2003); Eduardo Kohn, *How Forests Think: Toward an Anthropology Beyond the Human* (Berkeley: University of California Press, 2013).

13. Myers, "Becoming Sensor in Sentient Worlds: A More-than-Natural History of a Black Oak Savannah," 76.

which mimics mycelial forms of inoculation and permeation: “we could say—as do many DIY mycologists—that they are learning to ‘think like a mushroom’: that as they anthropomorphize the fungi, they are simultaneously mycologized, become fungi-like as they are inoculated with fungal ways of being.”<sup>14</sup> Such inoculation suggests that what has been thought of as anthropomorphism can work to decompose anthropocentrism. Beyond mere projection, the playfully anthropomorphic activities described above can also be mycomorphic and metamorphic. They animate both fungi and humans through mutually transformative engagement.

Anthropomorphism as projection only seems self-evident as an explanation because of deep-seated “colonial logics” that constrain the ways we imagine relations between humans and the more-than-human world.<sup>15</sup> The hubris of anthropocentrism, what Donna Haraway calls human exceptionalism, fools us into believing that we can extricate ourselves from the interspecies relations that make and transform us. Humans are not self-contained; rather we exist only through becoming-with where many different kinds of beings contribute to what is.<sup>16</sup> Anna Tsing and Tim Ingold, two anthropologists inspired by conversations with mycologists, have argued for a conception of the individual as constantly transforming through the indeterminacy of encounters.<sup>17</sup> To what extent practices of DIY mycology constitute a form of animism, or whether any set of practices can be referred to as animism at all, remains an open question.<sup>18</sup> Yet transformative entanglements of humans and mushrooms are a reminder that every one of us, human and not, exist wholly embedded within a more-than-human world, and that per the philosopher David Abram, this “is precisely our capacity for metamorphosis.”<sup>19</sup>

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14. Steinhardt, “Mycelium Is the Message: Open Science, Ecological Values, and Alternative Futures with Do-It-Yourself Mycologists,” 372.

15. Myers, “Becoming Sensor in Sentient Worlds: A More-than-Natural History of a Black Oak Savannah,” 74.

16. Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness*, 6; Anna Tsing, “Unruly Edges: Mushrooms as Companion Species: For Donna Haraway,” *Environmental Humanities* 1, no. 1 (2012): 144.

17. Ingold, “Two Reflections on Ecological Knowledge,” 306; Anna Tsing, *The Mushroom at the End of the World On the Possibility of Life in Capitalist Ruins* (Princeton, NJ: Princeton University Press, 2015), 47.

18. Steinhardt, “Mycelium Is the Message: Open Science, Ecological Values, and Alternative Futures with Do-It-Yourself Mycologists,” 421; Isabelle Stengers, “Reclaiming Animism,” *e-flux* 36 (July 2012): 9.

19. David Abram, *Becoming Animal: An Earthly Cosmology* (New York, NY: Random House, 2011), 254.

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