

Dying with 'Infinity Mushrooms'

– Mortuary Rituals, Mycoremediation and Multispecies Legacies

BY SALOME RODECK

ABSTRACT

In a world conceptualised as Anthropocene, in which human activities are transforming every part of the biosphere, funerals have become political and ethical activities in new and unforeseen ways. The use of formaldehyde in embalming practices and the release of air pollutants during cremation are only two of many points of criticism which have led to the rise of alternative 'greener' burial methods. The 'infinity burial project' is one such alternative, but it exceeds discourses on sustainable funerals by highlighting the toxicity of human bodies and challenging cultural taboos surrounding corporeal decomposition. Infinity burial employs 'mycoremediation', the usage of fungi for decomposing and cleaning up contaminated bodies and landscapes. Departing from Donna Haraway's call for embracing situated technical projects in order to make 'oddkin', this article explores how the infinity burial project engenders queer communities which dismiss taxonomical lines between species as well as ontological claims about life and death. Drawing on new materialisms' work on the radical openness of bodies, I explore how the infinity burial project sheds light on the material reality of decaying and the implications of dying in a polluted world.

KEYWORDS

Keywords: Death, Anthropocene, Haraway, queer desire, multispecies

Salome Rodeck, MA in Cultural Analysis from University of Amsterdam, is currently working as a visiting predoctoral fellow at the Max Planck Institute for the History of Science. Her research examines notions of symbiosis both in the natural sciences and the humanities and explores biological discourses surrounding and shaping the Anthropocene concept.

In 2011, MIT graduate and artist Jae Rhim Lee spoke at the TED Global conference in Edinburgh, Scotland. During her presentation, Lee was dressed in what looks like, as she humorously acknowledged, “ninja pyjamas” (Lee 2011, 00:13). With buttons on both the jacket and trousers for easy dressing and flaps for the face, hands and feet, what would later be called the ‘infinity burial suit’ indeed resembles pyjamas – put on by those preparing for the eternal sleep. Lined with a ‘biomix’ of bacteria and the spores of several species of fungi, the suit is designed to decompose human bodies. It forms a part of a larger project “at the intersection of art, science, and culture” (ibid., 02:26–29), which Lee refers to as the “infinity burial project, an alternative burial system that uses mushrooms to decompose and clean toxins in bodies” (ibid., 02:28–37). Since 2016, Lee’s company Coeio has been promoting the project and selling the suit.

In her TED Talk, Lee shows pictures of several petri dishes, filled with her hair, skin particles and nails, which she ‘fed’ to some of the most commonly known fungi – teaching them to decompose her bodily shedding and, eventually, entire bodies.¹ She calls these mushrooms ‘infinity mushrooms’, a hint to the idea of the incessant transformation of the material remains of bodies, which forms the cornerstone of Lee’s project. She explains:

“As I watch the mushrooms grow and digest my body, I imagine the infinity mushroom as a symbol of a new way of thinking about death and the relationship between my body and the environment (...) It’s a step towards accepting the fact that someday I will die and decay. It is also a step towards taking responsibility for my own burden on the planet.” (Lee 2011, 03:53–04:25)

Infinity burial addresses and problematises the changing nature of bodies in a polluted world, while at the same time fighting taboos surrounding decay and gesturing toward a renewed meaningfulness of death. In this article, I wish to connect the infinity burial project to some of the discourses arising around the Anthropocene concept in current feminist science and technology studies and new materialism(s). In particular, I seize Donna Haraway’s (2016) suggestion, that even though it is important to be sceptical toward “technofixes” (Haraway 2016, 3) promoted by a petrocapiatalist machinery in the face of a lurking environmental crisis, “it remains important to embrace situated technical projects and their people. They are not the enemy; they can do many important things for staying with the trouble and for making generative odd-kin” (ibid.).

In what follows, I wish to trace how the infinity burial project exceeds other alternative burial methods by challenging cultural notions of both the concept of kin and death and the relationship between both. I will show how it actively stirs up the sediment of the seemingly stagnant cultural realm of Western beliefs about death and post-mortem existence. I start off with a brief overview of current embalming methods and funerary customs, in order to set the stage for my reading of infinity burial as a situated ‘naturecultural’ project at the intersection of art, technology and speculative design that tackles questions of both ecological and ontological significance. I employ Anna Tsing’s concept of ‘world-making projects’, in order to highlight the inseparability of human existence from the flow of matter – toxic and otherwise – that constitutes worldly becoming. Her notion of ‘collaborative survival’ informs my reading of the infinity burial project as a reminder that both living and dying requires the help of nonhuman others. Following

Dianne Chisholm's notes on queer desire, the article concludes with the suggestion that thinking fungi as oddkin may engender a multispecies ethics, in which a heteronormative and speciesist ideology is replaced with a communitarian notion of legacy that renders tangible the worldly responsibility ingrained in the very atoms of our bodies.

TOXIC COSTUMES AND ANTHROPOCENE BODIES

Funerary customs seem to be reigned by a fear of the messy reality of life to creep in or seep out of human bodies. In most Western countries, but carried to its extremes in the United States, dead bodies undergo extensive manipulation before burial, especially where open casket viewing is part of the funeral. What is presented at such an occasion is the result of copious embalming methods, designed to hide signs of decay and decomposition. During the embalming process, the body is drained of blood and other fluids which consequently are substituted by embalming fluid, primarily formaldehyde (Hacker 2012, 151). This process slows down decomposition and preserves the body for the time of an open casket viewing. In addition to the actual embalming process, cosmetic processes include "disinfecting the corpse, securing the eyes and mouth in a closed position, and putting tight-fitting plastic clothing on the body to contain any leaking embalming fluid and undrained body fluid" (ibid.). Likewise, the body undergoes a 'beautifying procedure' ensuring that "it resembles as closely as possible the appearance of the person who has died". The corpse is then placed in a hardwood or metal casket, sometimes sealed with a thin rubber strip to provide "superior 'protection'" (Harris, 2007, 35). Especially in the United States, caskets are often placed in a metal or concrete vault, adding to the material and financial effort invested in order

to preserve the bodily integrity of diseased, which, according to Gary Laderman, is "a fundamental component of the American way of death" (Laderman 2003, xxxvi). Some Americans, Penny Coleman (1997) writes, believe that meticulous embalming and insulation measurements can stop the decaying process altogether, a myth that entices families to spend even larger amounts of money. It comes as no surprise that American funerals can amount to thousands of dollars, rendering the American funeral business lucrative, with revenues adding up to fifteen billion dollars a year (Harker 2012, 153). A lot of this money and effort is invested in rendering the deceased looking as if simply in a state of "serene sleep" (Laderman 2003, xxxv) – and thus are payed to conceal the material signs of death.

With environmental critique continuing to spread through all areas of society, alternative burial methods and products have gained in popularity over the last years. 'Green burial' addresses and denounces embalming and funeral practices for their environmentally harmful effects, often focusing on the huge material expenditure and the toxins employed for corpse preservation. A main concern is the use of formaldehyde in embalming fluids, which is classified as a known carcinogen by the International Agency for Research on Cancer since 2004 (Chiappelli and Chiappelli 2008, 25). In addition, more than forty other federally controlled toxins are regularly used in the embalming process (Iserson 1994, 211). Despite the efforts of keeping the body away from the soil, the 15-year warranty on many caskets is telling. Eventually, the bodily remains and toxic substances are most likely to leak into the ground. Thus, many cemeteries regularly receive biocide applications, which add to the increasing contamination of the grounds (Stowe et al. 2001, 1817). The ecological concerns about cremation, among the most popular options for corpse

disposal because of lower costs and less material waste, sound not less alarming. Cremation consumes considerable amounts of energy and releases carbon dioxide, mercury, and dioxin among other air pollutants, which are both problematic for residents and the biosphere at large (Mari and Domingo 2009; Doughty 2014). In the days of Anthropocene discourses, funeral practices are no longer exempt from larger questions of ecologically responsible citizenship.

Green burial criticises the toxic and material excesses of modern Western burial practices and offers alternative materials to substitute classic embalming fluids, makeup, hardwood caskets and steel vaults. Instead, it advocates for leaving the body untreated and using light and biodegradable materials, such as wicker or bamboo caskets or a simple shroud as a means to cover and transport corpses. In addition, a less intrusive way of embedding the grave into a landscape is often practiced. On green burial sites – often simple meadows or woodlands – no vaults are used and efforts to leave the local fauna and flora intact are being made (Hockey et al. 2012, 117). The general aesthetics is one of eschewing modernity and its practices and the promotion of a 'return' to premodern traditions, a programme that can be retraced in many companies and products designed as alternatives to contemporary and often environmentally damaging practices. This commitment to a certain non-modern aesthetic and often anti-technological doctrine however also sets the limits for both the innovative potential of green burial as well as the challenging of social taboos surrounding death and its position in modern Western societies. What can death mean in a secular society? How do we understand our physical presence in a time and age imagined as Anthropocene? Wicker caskets can only do so much when it comes to answering these questions.

Similar to other green burial methods,

Cocio's infinity burial suit is advertised as being "made of all natural, biodegradable material", using "no harsh chemicals, preservatives, or processing" and as "re-unit[ing] the body with the earth and the ongoing cycle of life" (Cocio n.d.). But instead of being stylised as a return to traditional funeral practices, infinity burial presents itself as a step forward, having created a "patent-pending technology", and attempts to bringing innovation to the funeral market. Since the efficacy of the 'biomix' of fungi and bacteria still has to be demonstrated, the infinity burial suit departs from practical questions of feasibility, and is better understood as a speculative design object, which raises issues of the connections between mortuary ritual and ecological harm and their relations to Western identities and ontologies. It can be situated within a larger movement using fungi as alternatives to popular naturecultural materials such as Styrofoam or cotton, blurring the lines between biotechnology and art (Nai and Meyer 2016). As such, the infinity burial project is best understood not as a market-changing product, but a poetic biotechno-artwork which challenges cultural taboos surrounding death and decay, and the deliberate ignorance of the enmeshment of bodies with the polluted world designated as Anthropocene.

As art has the "power to irritate, to provoke and to let us think and dream about the impossible" (ibid.), on a first plane, infinity burial unsettles notions of bodies as dignified remains of a beloved one. Lee claims that humans carry more than two hundred different toxic chemicals, accumulated over a lifetime, citing the Centers for Disease Control and Prevention, the largest national public health institute of the United States (Lee 2011, 00:49–01:02). She says:

"to me, this says three things: first, don't become a cannibal; second, we are both responsible and the victims of our own pollution,

and third, our bodies are filters and store houses for environmental toxins. So, what happens to all these toxins when we die? The short answer is, they return to the environment in one way or another, continuing the cycle of toxicity.” (Lee 2011, 01:02–32)

Lee reminds her audience that bodies have never been ‘pure’ and that attempts to protect them after death is a man-made illusion, designed to make us forget the messiness of both life and what ‘comes after’. Even more shocking, her description of bodies as “filters and store houses for environmental toxins” points at our deep involvement with increasing levels of pollution.

Environmental pollution and its implications for human bodies are central to Stacey Alaimo’s book *Bodily Natures* (2010), in which she develops the concept of trans-corporality in order to render tangible bodily connectedness with the environment. Starting from Harald Fromm’s observation that:

the ‘environment,’ as we now apprehend it, runs right through us in endless waves, and if we were to watch ourselves via some ideal microscopic time-lapse video, we would see water, air, food, microbes, toxins entering our bodies as we shed, excrete, and exhale our processed materials back out (qtd. in Alaimo 2010, 11)

trans-corporality stresses “the movement across bodies” and “reveals the interchanges and interconnections between various bodily natures” (Alaimo 2010, 2). The infinity burial project not only addresses trans-corporality but challenges a still prevalent ignorance of corporeal changes resulting from living in a polluted world. Lee’s presentation of the body resonates with Alaimo’s description of contemporary bodies as “dangerous hazardous waste”, a fact that, as Alaimo argues, “many people already know but either cynically accept or try to deny –

that all that scary stuff, supposedly out there, is already within” (ibid., 18).

There is no getting away from toxicity, even after death. The consequences of accumulating environmental toxins, Alaimo stresses, is a “particularly potent example of trans-corporeal space, in which the human body can never be disentangled from the material world, a world composed of emergent, entangled biological creatures as well as a multitude of xenobiotic, humanly made substances” (ibid., 24). Inextricably entangled with the world, bodies are always already a part of the planetary assemblage, toxic and otherwise. With an increase in environmental pollution, human bodies are in the process of increasingly becoming ‘Anthropocene bodies’: political and material manifestations of the planetary transformation caused by agro-industrial activities. Infinity burial thus not only offers a green burial method, but also draws attention to the consequences of trans-corporality for the living and the dead. In addition, it renders material just how invasive the global agro-industrial system and its endless streams of products and by-products has become.

The infinity burial project not merely points toward the toxicity of day-to-day life and death in the Anthropocene; it discursively and materially challenges the ontological status of bodies in the contemporary West. Whereas a standard funeral aligns with other cultural practices which allow us “to imagine ourselves as rarefied rational beings distinct from nature’s muck and muddle” (ibid., 8), infinity burial as a practice reconceptualises bodies as a “series of open-ended systems, functioning within other huge systems it cannot control” (Grosz 2004, 3). What Grosz calls systems, others have conceptualised as assemblages. Jane Bennett (2010), for instance, drawing on Deleuze and Guattari, argues for an understanding of bodies as assemblages, taking her cues from the materiality of human bodies. She contends:

One can note that the human immune system depends on parasitic helminth worms for its proper functioning or cite other instances of our cyborgization to show how human agency is always an assemblage of microbes, animals, plants, metals, chemicals, word-sounds and the like – indeed, that insofar as anything ‘acts’ at all, it has already entered an agentic assemblage. (Bennett 2010, 120–121)

While Bennett uses the material composite structure to underline her call for a recognition of the distributed nature of agency, the notion of bodily assemblage is in itself a subversive thought. Importantly, it manages to disrupt the rigid dichotomous structure of the relationship between “the natural and the social, (...) the biological and the cultural” (Grosz 2005, 30). Donna Haraway has epitomised the critique of such dualist thinking by positing an undivided yet pluralist realm of “naturecultures” (Haraway 2003, 2). The body of infinity burial, in sum, opens up a simultaneously material and discursive sphere in which bodies can be understood as ‘naturecultural’ assemblages, systems of knowledge, cells, heavy metals, gender and plastics. Understood this way, the ‘natural’ and tabooed messiness of decaying flesh and the ‘artificiality’ of contemporary bodies become tangible as inextricable parts of living and dying in the Anthropocene.

MYCOREMEDIATION AS COLLABORATION

The infinity burial project draws on an expanding field of knowledge on the abilities of some plants, bacteria, and fungi to eliminate and bind toxins from soil and water. This process is called ‘bioremediation’, or in the case of fungi, ‘mycoremediation’. Mycoremediation has delivered some promising results: yeast species have successfully been shown to reduce petroleum on the surface of water after oil spills (Singh 2006, 120), *Resinicium bicolor* can

effectively detoxify waste rubber material (Bredberg et al. 2002, 221) and *Glomus intraradices*, a mycorrhizal fungus, may contribute to uranium immobilization (Ruffykiri et al. 2003, 391). The infinity burial project proposes to select fungi species not only to transform human flesh, but also the heavy metals and other toxic substances that make up for Anthropocene bodies. In doing so, according to Coeio, these fungi not only deal with bodily toxicity, but help to “improve the soil, and enrich plant life” (Coeio n.d.), turning burial grounds into fertile patches of soil.

Mycoremediation is not so much state-of-the-art technology as it is a situated knowledge practice born out of a growing understanding of the relationship of organismic interactions changing and ruling ecosystem functioning, applied for Anthropocene troubles such as soil pollution, waste and overacidification. In other words, mycoremediation applies a deepened knowledge of fungal livelihoods for both human and nonhuman ends, without unidirectionally mastering these organisms.² In her book *The Mushroom at the End of the World* (2015) Anna Tsing’s writing on Matsutake mushrooms and the practices of mushroom hunting in the fringes of capitalism is a passionate call for paying attention to the “world-making projects” of generally marginalized and muted humans and nonhumans. She writes:

all organisms make ecological living places, altering earth, air, and water. Without the ability to make workable living arrangements, species would die out. In the process, each organism changes everyone’s world. Bacteria made our oxygen atmosphere, and plants help maintain it. Plants live on land because fungi made soil by digesting rocks. As these examples suggest, world-making projects can overlap, allowing room for more than one species. (Tsing 2015, 22)

Although such a perspective is not new, it

nevertheless has a deeper ontological significance that is largely ignored in Western culture. Similar to a conceptualization of the body as assemblage, it uncovers life to be a fundamentally joint multispecies endeavour, with or without intent. And it denounces humanity's ignorance to the variety of agents involved in creating the earth's habitability as a harmful illusion that causes reckless littering and polluting of this realm we call 'Nature', imagined as an 'outside' to human living.

Mycoremediation as a practice of using fungi for 'cleaning up' sites of pollution – and by doing so actively connecting human world-making projects with those of other organisms – is a way of acknowledging the entanglement of worldly livelihoods and that living and surviving need these kinds of collaborations. In her presentation, Lee claims, "once we understand that we are connected to the environment, we see that the survival of our species depends on the survival of the planet. I believe this is the beginning of true environmental responsibility" (Lee 2011, 06:58–07:12). At first sight, it appears counterintuitive to talk about survival in the context of alternative burial practices. But Lee's statement highlights that infinity burial has as much to do with life as it has with death. Challenging notions of death prevailing in Western individualist cultures – death as the affair of just one person – the infinity burial project is a symbol of an understanding of death as part of the constant renewal of interconnected webs of life, and at the core of both environmental activism and a grander fight for the survival of life on earth. Tsing reminds her readers that:

interspecies entanglements that once seemed the stuff of fables are now materials for serious discussion among biologists and ecologists, who show how life requires the interplay of many kinds of beings. Humans cannot survive by stomping on all the others." (Tsing 2015, vii)

Mycoremediating Anthropocene bodies, then, is not a technofix of 'corpse disposal'. It is an artistic endeavour of discursively and materially including dead bodies into the collective survival of thriving ecosystems and "mortal critters" (Haraway 2016, 2).

DYING WITH ODDKIN

Mycoremediating corpses is not only an extension of environmental responsibility toward human bodily remains, but also represents an instance of rethinking our relationship to those marginalised (because often invisible) yet important others, responsible for ecosystemic functions. In the introduction to her latest book, Donna Haraway (2016) suggests making collaborative survival an active task, acknowledging that even such an 'egotistical' wish as the survival of the human species is inextricable from cooperation with nonhuman others. She suggests the term 'oddkin' to express this need of forging deep relationships with those seemingly weird and irrelevant others like fungi, bacteria, insects and algae. "Staying with the trouble", she writes, "requires making oddkin; that is, we require each other in unexpected collaborations and combinations, in hot compost piles. We become-with each other or not at all" (Haraway 2016, 4).

Oddkin world-making projects productively overlap with those of humans, rendering a collective life on earth possible. To embrace fungi – restless devourers of organic and inorganic matter – as oddkin is to recognise the "thick copresence" of "mortal earthlings" (ibid.), in which a rigid life/death binary no longer has explanatory power. When fungi decompose human flesh, these molecules enter the nutrient cycle, becoming food for other organisms. Fungal oddkin quite literally become 'mediators of death', facilitating nutrient circulation in ecosystems, while consistently crossing boundaries between the living and

the dead, the organic and the inorganic. Consequently, thinking fungi as oddkin draws attention to a “material semiotics” (ibid.) of decomposition as a continuation of worldly existence and the place of death within it.

In her TED Talk, Lee explains that the infinity burial project is embedded in a larger project of cultural activism called ‘decompiculture’. “Decompinauts”, according to Lee, share a “common desire to understand and accept death and to minimise the impact of our death on the environment” (Lee 2011, 06:05–15). With her project, Lee wants to “cultivate this perspective, just like the mushrooms” (ibid., 06:15–18). She says:

“The decompiculture society shares a vision of a cultural shift: From our current culture of death denial and body preservation to one of decompiculture, a radical acceptance of death and decomposition. Accepting death means accepting that we are physical beings who are intimately connected to the environment.” (Lee 2011, 06:32–51)

Decompiculture thus embraces fungi not only as oddkin for the material decomposition of bodies, but as cultural agents which can challenge existing notions of the ontology and meaning of life and death. Thinking fungi as material-cultural oddkin thus means much more than just ‘accepting death’. It represents a revision of who or what can transform naturecultural realms in general and the life/death binary in particular.

QUEER DESIRE AND MULTISPECIES LEGACIES

A crucial part of the oddkin concept resides in its critique of heteronormative understandings of who or what can constitute one’s kin. In an article preceding and introducing the most important ideas of *Staying with the Trouble*, Donna Haraway proposes

“Make kin not babies!” (Haraway 2015, 161) as a fitting slogan for a post-Anthropocene future of “multispecies ecojustice” (ibid.). Summing up the past challenges of feminist scholars, who:

have been leaders in unravelling the supposed natural necessity of ties between sex and gender, race and sex, race and nation, class and race, gender and morphology, sex and reproduction, and reproduction and composing persons (Haraway 2016, 161)

she passionately incites her colleagues to attack yet another binary. “It is high time”, she writes, “that feminists exercise leadership in imagination, theory, and action to unravel the ties of both genealogy and kin, and kin and species” (ibid.). In times of overpopulation and mass extinction, the still very much prevalent obsession of the West with parent- and especially biological motherhood, not only exercises an ideology of separation through speciesism – limiting personal freedom as well as community building – but its effects also are detrimental to the planet’s biosphere at large. Imagining kin as an inclusive concept, a “wild category” (ibid., 2), Haraway writes:

Making kin as oddkin rather than, or at least in addition to, godkin and genealogical and biogenetic family troubles important matters, like to whom one is actually responsible. Who lives and who dies, and how, in this kinship rather than that one? What shape is this kinship, where and whom do its lines connect and disconnect, and so what? What must be cut and what must be tied if multispecies flourishing on earth, including human and other-than-human beings in kinship, are to have a chance? (Haraway 2016, 2)

Haraway sketches a multispecies future, in which the happiness linked to having a family is uncoupled from genetic similarity and instead reintegrated in a wider sense of communal belonging and care in worldly

copresence, which aligns personal choice with a shared responsibility toward species diversity.

In her reading of Ellen Meloy's "nature writing", Dianne Chisholm (2010, 360) develops a species-crossing 'queer biophilia' which rejects family-tree ideology in favour of rhizomatic kinship. Her understanding of queerness in this context resonates with Haraway's notion of multispecies worlding. "What makes Meloy's nature writing queer", Chisholm argues, "is not an express allegiance to minority sexuality but a creative and attentive naturalism that tracks interspecies couplings across the (...) vital landscape on a map of co-adaptation" (ibid.). She presents Meloy's biophilia as an alternative to what she calls a "popular form of queer nihilism that fails to imagine life beyond pro-life conservatism and its critical deconstruction" (ibid., 361). Instead, similar to Haraway's reimagination of kinship, Chisholm calls for an alternative to heteronormative love and affection beyond species lines, imagining an "ecological future of queer desire" (ibid., 377).

Following Deleuze and Guattari, Chisholm conceptualises desire not as sexual attraction between humans but "a force that is ontologically immanent to all life on earth, and that propels 'earth moves' across and between geological strata and biological orders" (ibid., 367), resulting not necessarily in the production of a new being, but rather a "transmutation of being – a 'becoming' – whereby heterogeneous beings conjoin in *aparallel evolution*" (ibid., 369, italics in original) or 'involution'. "In place of evolution, understood as mobilised by sexual selection for reproducing and developing species perfection in transcending succession", Chisholm writes, Deleuze and Guattari have coined the term 'involution', an alternative "entanglement of heterogeneous elements across species/specific lines of filiation and descent" that is not only creative but "*procreative*" (ibid., 369, italics in original).

This notion of queer procreation challenges a heteronormative ideology of desire and sexuality as the only way of securing the continuation of (human) life, and instead postulates a worldview in which borders between species on the one hand, and the living and the dead on the other, are disregarded in favour of dazzlingly diverse multispecies legacies. Instead of limiting post-mortal responsibility to the successful passing on of genes and materialistic belongings, infinity burial opens up a perspective of a communitarian notion of legacy that renders tangible the worldly responsibility ingrained in the very atoms of our bodies. Simply put, mycoremediated bodies are giving back to the collective what our fleeting material composition had reserved for its individual survival. Through the decomposition process, 'human' atoms travel through growing fungal mycelia which form symbiotic bonds with surrounding plants, thereby slowly infiltrating their material structure – rendering them ever so slightly more 'other-humanly'. In other words, nonhuman beings are built out of the 'stuff we are made of'. Such a knowledge of bodily existence inextricably links humans to the 'rest' of the world. Alaimo writes, "attention to the material transit across bodies and environments may render it more difficult to seek refuge within fantasies of transcendence or imperviousness" (Alaimo 2010, 16). An emphasis on material changeability of human bodies and their intertwinement with ecologic assemblages puts an end to such fantasies. Instead, it facilitates an ethical commitment to the world as our separation from it is exposed as an outdated notion of human specialness and an understanding of life as the "mortal play" of "queer messmates" (Haraway 2008, 19) becomes tangible.

Multispecies legacies not only have to do with responsibility, but also form the basis for an oddkin culture of mourning that is missing from the secularised West. Interestingly, paying close attention to the details

of decomposition and atom 'recycling', despite its material focus suggests an almost spiritual understanding of 'life after death' that can offer comfort for the bereaved. As the term 'infinity burial' suggests, Lee's decompiculture not only promotes 'radical death acceptance' but also reconceptualises death not as an ending, but a transformation into endlessness. As such, it is not much different from Christian and other religions' notions of afterlife immortality, however promoting an earthbound perspective instead of transcendence. Infinity burial uncovers that even within a post-transcendental society, existence itself can be understood as the endless transformation of matter. To me, this is a reassuring thought. On the one hand, dying with infinity mushrooms is as close to 'immortality' as my secular mind can open up to, as it emphasises the incessant journey of my bodily matter through the biogeochemical cycles of this world. On the other hand, standing in a graveyard, I can only wonder how feelings of grief and mourning would change if instead of marble stones I saw patches of mushrooms, plants and critters which – even if only infinitesimally – embody lost loved ones.

CONCLUSION

As quoted above, Haraway (2016, 2) asks: "What must be cut and what must be tied if multispecies flourishing on earth, including human and other-than-human beings in kinship, are to have a chance?" Infinity burial especially addresses a wealthy, predominantly Christian culture and its sedimented wasteful practices, proposing to cut ties with an ideology that separates humans and nonhumans as well as life from death. Instead, it shifts our focus to a multispecies world in which we can not only find ways to contribute meaningfully to biotic flourishing but also unexpected consolation in oddkin communities with which both our survival and death are inextricably linked.

Even more, it shows that letting go of individualist notions of death can become the foundation for a life-affirming ethics of collaborative survival and thus gestures toward a way out of the isolating and devastating Anthropocene and towards queer futures of multispecies flourishing.

Starting from a short history of burial practices and its most recent developments in the light of 'greening discourses', I have traced how the infinity burial project productively not only criticises modern 'corpse disposal' but challenges ontological beliefs about what life, living and dying means in a (post-)Christian society. By connecting infinity burial to new materialist theories on bodily assemblages, I argued that Lee's TED Talk denominates the material transit of toxins in the modern world and conceptualises the bodily mutation resulting from our enmeshment with the world we have created. In this context, I have proposed an understanding of mycoremediation – the biotechnology used in the infinity burial suit – as an active and collaborative alignment with the 'world-making projects' of fungi, offering a reconceptualization of death as a continuation of existence and a contribution to the survival of biotic communities. In the remainder of the article, I have taken cues from Haraway and Chisholm in order to get at a deeper understanding of what it means to 'align with fungi'. Acknowledging the unusualness of this proposal, I borrowed the concepts of oddkin and queer desire in order to find a vocabulary to render such weirdness productive. Both concepts have helped me to uncover a deeper level at the core of the infinity burial project, one which denounces the ecological devastation of the planet to be inextricably linked to an ideology of speciesism. At the same time, it suggests an inverse logic by gesturing toward a queer future of ecosystem thriving through the collaborative survival of oddkin.

In sum, then, the aim of this article was to open our imagination to how a post-An-

thropocene future might look, and to oppose fantasies of technofixes on the one hand, and romantic hopes of a 'return to Nature' on the other. Instead, my reading of the infinity burial project shows that accepting the entanglement of world-making projects of humans and nonhumans can help us to find situated answers for ecological challenges – and also the unexpected support of queer multispecies communities in times of global as well as personal crises.

NOTES

1. Unfortunately, despite several attempts I was unable to get in touch with Lee or other members of Coeio. Therefore, I have no certainty on the fungi species used. An image Lee uses in her presentation and which also can be found on coeio.com presumably shows *Pleurotus eryngii* (King oyster), *Pleurotus ostractus* (Oyster mushroom), *Flammulina velutipes* (Enokitake) and *Agaricus bisporus* (Portobello mushroom), all of which have been tested to varying degrees for their mycoremediation potential. See Hamba and Tamiru 2016; Kapahi and Sachdeva 2017.
2. Tsing makes a compelling case for the two-way relation of domestication, rejecting anthropocentric ideas of humans taming other organisms while staying unchanged. Turning her argument on the head, I want to suggest to understand mycoremediation and the ethical claim I am developing from it as a diversifying of multispecies being, similar to the role of play in the creation of companion species, rather than a limiting of fungal livelihoods. See also Tsing (2012).

REFERENCES

- Alaimo, S. 2010. *Bodily Natures: Science, Environment, and the Material Self*. Bloomington/ Indianapolis: Indiana University Press.
- Bennett, J. 2010. *Vibrant Matter. A Political Ecology of Things*. Durham/London: Duke UP.
- Bredberg, K., Andersson, B.E., Landfors, E. and Holst, O. 2002. Microbial Detoxification of Waste Rubber Material by Wood-Rotting Fungi. *Biore-source Technology*. 83(3), 221-224. DOI:

[https://doi.org/10.1016/S0960-8524\(01\)00218-8](https://doi.org/10.1016/S0960-8524(01)00218-8)

- Chiappelli, J. and Chiappelli, T. 2008. Drinking Grandma: The Problem of Embalming. *Journal of Environmental Health*. 71(5), 24-28.
- Chrisholm, D. 2010. Biophilia, Creative Involvement, and the Ecological Future of Queer Desire. In: Mortimer-Sandilands, C. and Erickson, B. eds. *Queer Ecologies. Sex, Nature, Politics, Desire*. Bloomington/ Indianapolis, Indiana: Indiana University Press, 359-382.
- Coeio. no date. *coeio.com*. [Online]. [Accessed May 29 2018]. Available from www.coeio.com
- Coleman, P. 1997. *Corpses, Coffins, and Crypts: A History of Burial*. New York: Henry Holt and Co.
- Doughty, C. 2014. *Smoke gets in your eyes: and other lessons from the crematory*. New York: WW Norton & Company.
- Grosz, E. 2004. *The Nick of Time. Politics, Evolution and the Untimely*. Durham, N.C.: Duke University Press.
- Grosz, E. 2005. *Time Travels. Feminism, Nature, Power*. Durham, N.C.: Duke University Press.
- Hamba, Y. and Tamiro, M. 2016. Mycoremediation of Heavy Metals and Hydrocarbons Contaminated Environment. *Asian Journal of Natural & Applied Sciences*. 5(2), 48-58.
- Haraway, D. J. 2003. *The Companion Species Manifesto*. Chicago: Prickly Paradigm.
- Haraway, D. J. 2015. Anthropocene, Capitalocene, Plantationocene, Chthulucene. Making Kin. *Environmental Humanities*. 6(1), 159-165. DOI: <https://doi.org/10.1215/22011919-3615934>
- Haraway, D. J. 2016. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, N.C.: Duke University Press.
- Harker, A. 2012. Landscapes of the Dead: An Argument for Conservation Burial. *Berkeley Planning Journal*. 25, 150-159.
- Harris, M. 2007. *Grave Matters: A Journey Through the Modern Funeral Industry to a Natural Way of Burial*. New York: Scribner.
- Hockey, J., Green, T., Clayden, A. and Powell, M. 2012. Landscapes of the dead? Natural burial and the materialization of absence. *Journal of Material Culture*. 17(2), 115-132. DOI: <https://doi.org/10.1177/1359183512442631>
- Iserson, K. V. 1994. *Death to Dusk: What Happens to Dead Bodies?* Tucson: Galen Press.
- Kapahi, M. and Sachdeva, S. 2017. Mycoremediation Potential of Pleurotus Species for Heavy Metals: a Review. *Bioresources and bioprocessing*, 4(32), p.n.p. DOI: 10.1186/s40643-017-0162-8

- Laderman, G. 2003. *Rest in Peace: A Cultural History of Death and the Funeral Home in Twentieth-Century America*. New York: Oxford UP.
- Lee, J. R. 2011. *My Mushroom Burial Suit*. [Online]. [Accessed June 13, 2018]. Available from: www.ted.com/talks/jae_rhim_lee#t-147242
- Mari, M. and Domingo, J. L. 2009. Toxic Emissions from Crematories: A Review. *Environment International*. 36, 131-137. DOI: <https://doi.org/10.1016/j.envint.2009.09.006>
- Nai, C. and Meyer, V. 2016. The Beauty and the Morbid: Fungi as Source of Inspiration in Contemporary Art. *Fungal Biology and Biotechnology*. 3(10), p.n.p. DOI: <https://doi.org/10.1186/s40694-016-0028-4>
- Rufyikiri, G., Thiry, Y. and Declerck, S. 2003. Contribution of Hyphae and Roots to Uranium Uptake and Translocation by Arbuscular Mycorrhizal Carrot Roots Under Root-Organ Culture Conditions. *New Phytologist*. 158, 391-399. DOI: <https://doi.org/10.1046/j.1469-8137.2003.00747.x>
- Singh, H. 2006. *Mycoremediation: Fungal Bioremediation*. New Jersey: John Wiley & Sons.
- Stowe, J. P., Vernon Schmidt, E. and Green, D. 2001. Toxic Burials: The Final Insult. *Conservation Biology*. 15(6), 1817-1819. DOI: <https://doi.org/10.1046/j.1523-1739.2001.00348.x>
- Tsing, A. 2012. Unruly Edges: Mushrooms as Companion Species. *Environmental Humanities*. 1, 141-154.
- Tsing, A. 2015. *The Mushroom at the End of the World. On the Possibility of Life in Capitalist Ruins*. Princeton/Oxford: Princeton University Press.
- Tuana, N. 2007. Viscous Porosity: Witnessing Katrina. In: Alaimo, S. and Hekman, S. eds. *Material Feminisms*. Bloomington/Indianapolis: Indiana University Press, 188-213.