



Zoë Ritts. *Untitled*. 2015. Holding a Kombucha SCOBY, a Symbiotic Culture Of Bacterial Yeast.

BECOMING MICROBIAL

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There is a trope that regularly emerges in writing about the human microbiome, the collection of microbes that live in and on the human body. Our microbial abundance is written about as evidence enough to destabilize our notion of what counts as a healthy human, but little consideration is given to what this revised, not-entirely human might look like ethically, relationally, aesthetically, or ontologically.

In her *New York Times* article “We Are Our Bacteria,” Jane E. Brody writes, “every person alive is host to about 100 trillion bacterial cells. They outnumber human cells 10 to one and account for 99.9 percent of the unique genes in the body.”¹ The microbe is always described by its incomprehensible scale. Even Donna Haraway takes pleasure in the enormity, giving it privileged space in the second paragraph of *When Species Meet*. Haraway, however, gives pause to the implications of our biological reality. She writes, “I am vastly outnumbered by my tiny companions; better put, I become an adult human being in company with these tiny messmates. To be one is always to *become with many*.”² Haraway’s notion of “becoming with” is an acknowledgment of the successful and unsuccessful human-non-human relationships flourishing in and around us. Usefully, it does not insist on what microbial success might look like. What we become is not necessarily what we want to become; the non-humans within us help or hinder us from becoming what we are. As I move into written texts about living with the AIDS virus and other texts about the philosophy of fermented food, I foreground this idea that our relationship with microbes makes us something we may or may not want to be, but something that is other than *just-human*.

The fermentation practitioner, activist, philosopher Sandor Katz opens his first book *Wild Fermentation* with a dedication:

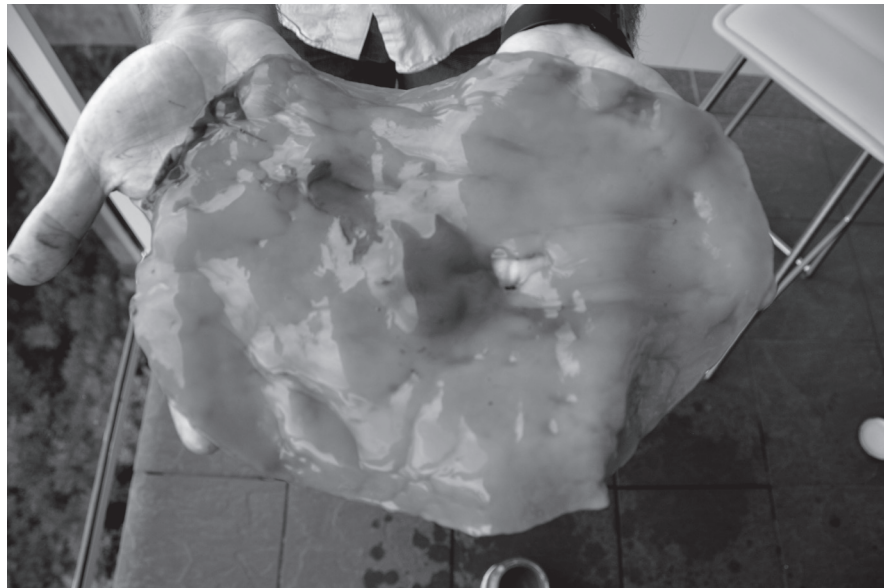
Dedicated to Jon Greenberg (1956-1993)

This beloved ACT UP comrade first articulated to me the idea of peaceful coexistence with microbes rather than warfare. I honor Jon and all our fellow skeptics, rebels, and iconoclasts who question prevailing wisdom and authority. Believe in the future and keep change fermenting.³

Katz’s practice of making and philosophizing about fermented foods by cultivating intimacy with fermenting microbes has a prehistory in AIDS activism and the dissident relationships some people with AIDs (PWAs) developed with the virus. The founder of ACT UP New York’s Treatment Alternatives Program and a later participant in ACT



Zoë Ritts. *Sor Juana Inéz de la Cruz.* 2015. SCOBYS are commonly given names by their human kin. Amongst the queers whom I trade SCOBYS with, the names often aspire to a kind of iconic, female grandeur. The first SCOBY I was gifted was named Mother Russia.



Zoë Ritts. *Untitled.* 2015. A SCOBY with her fluids and one of her homes, the jar, in the background.

UP's Holistic Treatment Committee, Greenberg was the author of the pamphlet "Choosing Therapies for Individual Treatment Strategies." In it he writes actively against medical interventions into HIV/AIDS, favouring a radical closeness with illness, viral life, alternate notions of health, and, if it comes to it, death. He writes:

I have finally come to the realization that the power to heal comes from within, not from without. [...] By listening to my body I am also listening to this thing called AIDS and consequently I understand it in a way that no person not living with AIDS can begin to understand it; and that sometimes the only way to begin to listen to one's own body and tap the knowledge within is to stop listening to everyone else outside.⁴

Greenberg theorizes a type of knowledge that he alone possesses because only he has his virus: "I believe that PWAs have an understanding of this condition and how to best live with it that no doctor who is not a PWA can begin to comprehend simply because he or she is not living with it inside his or her body."⁵ By Greenberg's logic, human-microbe relations yield an epistemology; the transmission of bodily fluids is an epistemological transmission. His body holds non-human microscopic life, and that life imparts knowledge as it thrives dangerously. From this perspective, and riffing off the philosopher of science Lynn Margulis, AIDS is a sexually transmitted epistemology.

Greenberg does not conceive of his relationship to AIDS as a fight against death, but rather as a relationship based on models of host-guest, teacher-student. Greenberg writes, "AIDS is not a punishment to me but a gift," a teacher of "wonderful lessons" about "pain and confrontation with death."⁶ Having had his body opened up by the virus, Greenberg submits to the lessons of AIDS, opening himself up to the pleasure of moving from not knowing to knowing more. Though tutelage is usually a solely human affair, Greenberg moves from ignorance to something like knowledge with the teachings of non-human life. The virus is the gift the guest brings. Maybe you invite the guest, but maybe you don't, and maybe you expect a gift, but maybe the gift is not the thing unwrapped and poured over later. The gift might be the thing that alters you, making you into something you didn't plan to be. The virus is an object that asks you to honour the non-human things that make up your self.



After enough time passes, I begin to experience holding a symbiotic culture of bacterial yeast, a SCOBY, as erotic. A variety of yeast species and bacteria come together, defying scientific categorizations as they do, in order to make up the thing that humans know, accurately or not, as the SCOBY. The SCOBY will not move across your counter or cower

away from your touch, but it is very much alive and moving, growing and giving off energy. It catches and warps the light, has girth in your hands, gets bigger as you leave it in the warmth of your kitchen cupboard or your bedroom closet. Its unfamiliar movements bond it to the human. It is unpredictable, elicits emotional experiences, churns the intellect, provokes conscious and non-conscious changes in the body. The SCOBY brings you into its rhythm of quiet bubbling. When you remember to, you visit a community of fermenting actors and are welcomed by its changes. The awe and frequent admiration for the structures fermenting microbes are building. The brown filaments that string downward and sideways in intricate lines are part of your appreciation for its built environment, which is constantly changing. The SCOBY asks you to reflect on the meaning of taste when to taste becomes to test and to integrate and to welcome non-human life into your self. Touch and texture are also altered when life is the white opacity of foggy pearls or semen, and smooth outsides recall smooth human insides.

Who's to say my love of the SCOBY is unrequited? The fermenting microbes grow with me, rely on me, make food for me, are cold with me, coevolve with me, leave some living trace behind in me when I ingest them. Love might be the alteration of our human selves and our human bodies for another thing; as the microbes change the living communities inside me, the movements of my body's processes, and the way I conceive of my bodily functions, how can I deny them the status of partner(s) or love object? How can I not become microbial to be with them?

The Symbiotic Culture Of Bacterial Yeast ferments me. Flourishing microbial life alters the matter that makes me up. The SCOBY is called mushroom, mother; it is mixed up in biological and familial kinship relationships that are neither same species nor same temporality. She'll live forever if I care for it. He'll grow "babies" forever on their backside if I provide the right environment. Lynn Margulis says of the fermenting microbes that make up kefir that its evolution "preceded programmed death."⁷ That is, the SCOBY has not evolved a time-bound life span and so it goes on living (giving, fermenting, altering, loving) forever if provided the necessary pH level and proper amounts of light, temperature, sweetness, and exposure to oxygen. The microbial time experienced by the fermenting human is altered by sweetness and warmth. The environment we construct for our ferments are our acts of care for this non-human life. The architected space around them is the thing that decides whether they flourish or wither. Sandor Katz writes, "Sourdough starters are not static microbial entities," adding, "they become their environment."⁸ Fermenting non-human life relies on architecture to live, and not just to live, but to flourish in coevolution with human and non-human organisms.



Zoë Ritts. *Untitled*. 2015. Science writers like to point out that the microbiome is so significant to human bodily function it could be classified as additional "organ" or a "second brain." To call something an 'organ' is to expect it to perform a particular physiological function. The etymology of organ is mixed up with the Latin *organum*, meaning mechanical device, instrument, engine of war. Foregrounding the SCOBY on a headless human, we're reminded of Deleuze and Guattari's "body without organs," in which, according to Mel Chen, "no given organ has merely one functionality, and the organism itself cannot be represented as an ordered system." The "body without organs" immensely benefits imaginative eros.

What is gained by thinking about having HIV/AIDS as an interspecies relationship? What value is there in understanding living and dying with AIDS as a becoming with or a flourishing into something you never intended to be? Sick, yes, but surely also interacting with different life forms and forms of life as well. The companion species relationship, according to Haraway, teaches us "to pay attention to significant otherness as something other than a reflection of one's intentions." AIDS becomes a companion as it reveals its "bestiary of agencies, kinds of relatings, and scores of time."⁹ Quite literally, AIDS is a disease in which the T4 cells in the immune system are destroyed, transforming the body into an hospitable environment for invading micro-organisms, germs that take advantage of an immune system not doing its work, or doing different work, to gain some kind of advantage within human bodies. AIDS is an experience of multiple bacterial organisms, but its multispecies dimensions abound when you consider that PWAs are uniquely faced with diseases formerly found only in sheep, cats, or birds. AIDS is an illness that brings humans into too close contact with non-human life. In the March 2012 issue of *The Atlantic* there is an article by Kathleen Mcauliffe about the neurological relationship between humans, their cats, their cats' feces, and the *Toxoplasma gondii* parasite found in

that feces. Of this human-non-human-object-microscopic-organism-etc. relationship, she writes, “in the early days of the AIDS epidemic [T. gondii] was to blame for the dementia that afflicted many patients at the disease’s end stage.”¹⁰ AIDS is the proliferation of non-human life within the human body, an abundance of microbes that force the human to consider the ways in which they were already microbial.



Art Spiegelman’s one-page comic leaflet entitled “Play With your Cells, and Become Your Own Food!” was reprinted in underground newspapers and published in *Witzend* in 1967.¹¹ The leaflet relays a philosophy of self-experimentation, encouraging play within the body to become something else. In this way it resembles work of Katz and some AIDS dissidents like Jon Greenberg. In the comic, an elfin “pilgrim” in a pyjama-hat drinks a porridge-like drink and is transported, I’ll say, “elsewhere.” A slender, long-haired, naked woman greets him warmly, but a moment of dark hallucinating panic comes over the pilgrim and he grows more and more anxious amongst the many non-human species who tell him menacingly, “And here I am!” With what appears to be a great inhale, the pilgrim announces in text that breaks through the frames of the panels, “And Here I am!” and, in gay flight, he leaps to the air, kicks his heels, and takes off into the smell of flowers. While having a “botanical brainwave,” the pilgrim is transformed into a plant. Half plant life, the pilgrim is placed in what looks like a trumpet, and, from outside the frame, a voice tells him, “Play with your cells...” In the next panel, the naked woman sits beside the pilgrim, now a butterfly with a smiling human face, and she finishes the sentence: “...and become your own food.”



The same lactic acid bacteria found on dairy products, meat, vegetables, and sourdough bread is found on the human mucosal surface of the human gastrointestinal tract and vagina. In one of his many brief movements away from the fermentation of food, Sandor Katz explains that the human vagina secretes glycogen—a form of storage for glucose, sugar—in order to feed the lactobacilli that are indigenous to the vaginal environment.¹² Microbes ferment that glycogen to produce lactic acid, and, as the vagina becomes acidic, pathogenic bacteria find it less hospitable and cannot flourish. The built environment of the vagina supports a productive acidity and sweetness. A “healthy” vagina is overrun with fermenting microbes. Produce glycogen, become your own food, feed microbes, flourish in multispecies relationships.



A queer witch called J.R. gave me my first SCOBY. The next time I saw him he was performing as the archangel Gabriel near the shrine of

Guadalupe-Tonantzin in Mexico City. He was attempting to communicate with his prisoner correspondent, performing non-human life to enrich his jailed friend’s erotic fantasy. Once again, non-human being begets a non-human intimacy that we could easily call erotic. When I later told the witch my SCOBY wouldn’t ferment, that it just sat atop its liquid environment, a watery plinth in reverse, he told me it was cold—cold in a Toronto kitchen where I was often anxious and the ego of one human was all that the built environment could sustain. The witch told me to find a way to give the SCOBY warmth. As inspiration, he told me a story about Canadian woodsmen.

Once there was a group of men, heavy in plaid and thick fabrics. The men needed warmth so they shared blankets and helped each other maintain one fire. The warmth didn’t amount to much, but every bit they could spare they gave to each other. Backs warmed backs. One man’s steamy exhale warmed the lucky heels of another man nearby. One fellow found that if he lay like a small spoon and a bigger man lay like a big spoon, they could heat each other almost totally from head to toe. The one who figured this out, the small spoon, added a SCOBY to the alignment and kept it warm in its jar placed between his raised knees and his curled torso. The warmth from his barely warm body was enough and the SCOBY fermented.



I had been calling fermentation a fetish until it was suggested that the classically Freudian fetish starts from a place that is not sexual. But fermentation starts from a place of reproduction, growth, flavour, patience, scent, texture, anticipation, culmination, and care—how can I say this is non-sexual? Ferments fulfill our desires. They are considered disgusting or unclean by some, and others take abject pleasure in the fact that they are interacting with promising mold. Katz writes, “before I started growing koji, I would never have believed it possible to fall in love with a mold. But I have been seduced by fresh koji’s sweet fragrance.”¹⁴ In *The Art of Fermentation*, Katz includes the words of a Washington-based fermenter named Favero Greenforest: “The koji smelled so wonderful I just want to roll around in it.”¹⁵ The book also collects a poem by someone named Qilo Kinetchore, called “Microorganisms In My Bed” where the eros of fermentation comes through in the lines like, “plump heart packed tight/i want rot/to bloom audibly/in start flung nights.”¹⁶

The eros mixed up with these fermenting actions reminds me of a scene from Tim Luscombe’s play *PIG*, which had its world premier at Buddies in Bad Times Theatre in Fall 2013. Two characters named Pig and Knife are going back and forth, talking dirty about what they want to do to each other. Knife wants to be fucked by anyone, “however gruesome.” He then begs for someone “Diseased,” and Pig responds, “If his cock is dripping with pus, shove it in me. I want it all.”¹⁷ The fermenter and the sex pig put pressure on the desire to want it all. The

fermenter and the sex pig ask what it is to desire flourishing excess. The fermenter and the sex pig are united in their desire for the places on the body, the spaces of the world, and the functions of life that are not altogether just-human.

In her wonderful book *Becoming Undone*, Elizabeth Grosz calls architecture the “first and most primordial of the arts.” Grosz argues that qualities become “extractable,” that there is possibility for “the pure joy of qualities” and “the immersion of the living in intensities,” when “a territory, “a framed and delimited space” exists.¹⁸ According to Grosz, architecture crucially delimits space so that the conditions for the complication of life and matter can manifest.

Fermentation is the enlivenment of matter *within* delimited space. The meaning of the leaf may be altered when its place in framed space is altered, but leave it where it is and allow flourishing microbes to dance on its surface and that matter will bring forth joyous qualities and living intensity. No one but the fermenter has used the space of the jar, the cabbage head, and the covered pit to such a degree. Fermentation is the intensification of seemingly static matter, and a fermentation practice is the real and imagined perception of microbial flourishing. Fermentation is redesigning the external architecture from the inside out. Without changing limits and borders, fermentation draws out matter’s qualities, rhythms, sounds, and colours—the same extractables Grosz names as being altered by art and architecture.

In his poem *This Compost*, Walt Whitman’s narrator marvels that the earth yields life while it is composed of death.

What chemistry!
That the winds are really not infectious,
That this is no cheat, this transparent green-wash of
the sea which is so amorous after me,
That it is safe to allow it to lick my naked body all
over with its tongues,¹⁹

Whitman exalts the function of the earth and bonds erotically with the hyperobjects of the planet. He is confounded that he is safe amongst the things that emerge from mold and end in decay, but this fear—“Now I am terrified at the Earth!”—is what makes his ultimate submission so moving. Without describing the microbes that change decay into life, Whitman identifies their actions in the generic human term “chemistry.” As Whitman moves closer to the Earth’s absorption of death—“Where have you disposed of their carcasses?”—he reveals the same closeness with death that Katz discusses in his writing about

fermentation. Fermentation helps Katz get “acquainted with death.” “Fermentation also describes the process by which microorganisms digest dead animal and plant tissue into elements that can nourish plants,” he writes in a section of *Wild Fermentation* called “Cultural Reincarnation.”²⁰ In the same section, Katz excerpts a portion of the same Whitman poem, but before doing so, he describes what to do with his body when he dies. He wants a “transition period” where friends and family can be with his body, touching his “clammy skin” in order to demystify death. He writes: “A huge funeral pyre would be lovely; if that’s too much to bear, just place me in a hole in the ground, no casket please, and let me compost fast.”²¹

Fermenters, PWAs, queers, poets, stoned-pilgrims, and philosophers have given us cause to rethink the impact of communities of bacteria living inside of us. It is not enough to acknowledge their existence or attempt to harness it. The idea is to come into frightening proximity with barely perceptible life in order to become something else. Something other than we wanted to be, something microbial, something not just human.

1 Jane Brody, “We Are Our Bacteria,” *The New York Times*, 14 July 2014, well.blogs.nytimes.com/2014/07/14/we-are-our-bacteria.

2 Donna J. Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008), 4.

3 Sandor Katz, *Wild Fermentation: The Flavor, Nutrition, and Craft of Live-Culture Foods* (White River Junction, Vermont: Chelsea Green Publishing, 2003), vi.

4 Jon Greenberg, “Choosing Therapies For Individual Treatment Strategies,” *ACT UP New York*, 1992, www.actupny.org/treatment/greenbergChoose.html.

5 *Ibid.*

6 *Ibid.*

7 Lynn Margulis, “From Kefir to Death,” in *Slanted Truths: Essays on Gaia, Symbiosis, and Evolution* (New York: Copernicus, 1997), 89.

8 Sandor Katz, *The Art of Fermentation: An in-Depth Exploration of Essential Concepts and Processes from around the World* (White River Junction, Vermont: Chelsea Green Publishing, 2012), 308.

9 Haraway, *When Species Meet*, 6.

10 Kathleen Mcauliffe, “How Your Cat Is Making You Crazy,” *The Atlantic*, March 2012, www.theatlantic.com/magazine/archive/2012/03/how-your-cat-is-making-you-crazy/308873.

11 Art Spiegelman, “Play with Your Cells & Become Your Own Food!” *Witzend* 3 (1967).

12 Katz, *The Art of Fermentation*, 46.

13 Mel Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Durham, NC: Duke University Press, 2012), 151-152.

14 Katz, *The Art of Fermentation*, 383.

15 *Ibid.*, 383.

16 *Ibid.*, 365.

17 Tim Luscombe, *PIG (Draft Four)*, 2011, www.timluscombe.com/wp-content/uploads/2013/02/TL2-SCRIPT-Pig-D4.pdf.

18 Elizabeth Grosz, *Becoming Undone: Darwinian Reflections on Life, Politics, and Art* (Durham, NC: Duke University Press, 2011), 172.

19 Walt Whitman, “This Compost,” in *The Portable Walt Whitman*, ed. Michael Warner (New York: Penguin Classics, 2004), 130.

20 Katz, *Wild Fermentation*, 158.

21 *Ibid.*, 161.