



# The Political Life of Cancer

## Beatriz da Costa's *Dying for the Other* and *Anti-cancer Survival Kit*

LINDSAY KELLEY

UNSW Art and Design, University of New South Wales, Australia

**Abstract** One of the late Beatriz da Costa's last projects, *Dying for the Other* (2011), presents three channels of video footage from testing environments, including laboratories, hospitals, kitchens, and living rooms offset by pink mice wriggling in their cage, living and dead mice weighed and handled by breast cancer researchers, and the materials of laboratory and medical work: test tubes, petri dishes, scalpels. Together across three shared video channels, bald pink mice have materially moved into da Costa's frail body through a deft game of pharmacological cat's cradle. This article will investigate da Costa's *Dying for the Other* and a related project, the *Anti-cancer Survival Kit* (2013), as engagements with Elizabeth Wilson's articulation of the gut as "an organ of mind." Figuring the eating body as ecosystem illuminates how cancer's political potential furthers both Wilson's desire for "sustained attention [to] the nature of attacking, sadistic impulses, and the difficulties of how to live (and politick) with them" and Scott Gilbert, Jan Sapp, and Alfred Tauber's call for "intermingled symbiont relationships." The multispecies power structures playing out in *Dying for the Other* and the *Anti-cancer Survival Kit* reveal the political life of cancer to be animated by cellular and culinary anarchisms, bile, toxicity, frustration, and, in da Costa's words, "more than even I can take."

**Keywords** art, cancer, food, multispecies

### Introduction: *Cost of Life*

Beatriz da Costa died on December 27, 2012.<sup>1</sup> She was thirty-eight years old. She had been negotiating with cancer for many years. These negotiations were not addressed by her art practice until her cancer became active in her brain. While working with the brain tumors, she found ways of articulating cancer's political liveliness. Of her decision to engage her experience with cancer after many years of resisting such engagement, Robert Nideffer writes that she found "a place from which to provoke and

1. Nideffer, "In Loving Memory of Shani"; Haraway, "Remembering Beatriz da Costa."

reflect without it, as she said, ‘being about me.’”<sup>2</sup> By focusing on projects produced in the last years of her life and posthumously, this essay remembers and speculates on the antiauthoritarian politics of da Costa’s engagement with cancer. While making these works, *Invisible Earthlings* (2008–9), *Dying for the Other* (2011–12), and the *Anti-cancer Survival Kit* (2013), da Costa moved from remission to metastatic disease and then into death and posthumous production. In what follows I will introduce these three projects and then consider each in relation to anticonsilient practices across the arts, medicine, and critical theory. Because da Costa’s last projects have not yet been written about extensively in scholarly contexts, I hope that this essay extends an invitation to interdisciplinary arts and environmental humanities scholars to further engage with these works.

Da Costa aligns her practice with that of “the politically oriented artist engaged in technoscientific discourses” she describes in her essay “Reaching the Limit: When Art Becomes Science.”<sup>3</sup> Her projects educate visitors with public performances, workshops, and interactive installations, and develop collaborations between humans, animals, and machines. In 2007 da Costa began to engage microbes in her unfinished dissertation in the history of consciousness at University of California, Santa Cruz. This research became *Invisible Earthlings*, an installation and practical microbiological “investigation into the possibilities of relating between humans and members of the lived non-human worlds that we are least likely to recognize as social actors.”<sup>4</sup> By drawing out possible social relations with microbes, da Costa plumbs moist dark places—our guts, our gardens, our dripping taps—opening these worlds to levels of affective engagement previously denied them. The *Invisible Earthlings* installation included arrays of petri dishes floating under dramatic spotlights, educational animations on handheld devices, and collaborative workshops.

These approaches to the microbes of *Invisible Earthlings* build on da Costa’s previous projects, including *Pigeonblog* (2006), which collaborated with pigeon fanciers to equip pigeons with air quality sensors to map pollution levels; *Swipe* (2002–4) with Pre-emptive Media, which responded to the increasing ubiquity of RFID (radio-frequency identification) sensors with a scanner integrated into a bar; and a number of projects made in collaboration with the Critical Art Ensemble, including *Transgenic Bacterial Release Machine* (2001–3), designed to release transgenic bacteria into the atmosphere using a robotic game interface. All of these projects make invisible or microbial technologies or particles visible, and provoke a shift in affective responses to environmental conditions. *Invisible Earthlings* links projects like *Pigeonblog* and *Swipe* to da Costa’s last works, which track and attempt to intervene in cancer self-care and biomedical research. Although cancers do not appear in the cultures of *Invisible Earthlings*, microbial

2. Nideffer, “In Loving Memory of Shani.”

3. da Costa, “Reaching the Limit,” 365.

4. da Costa, *Invisible Earthlings* (2008–9).

politics join cancer politics if we consider the ways in which cancers might be social actors, sensors, and invisible earthlings. Historically, cancer has been described as “cellular anarchy,” suggesting how cancer might have political agency.<sup>5</sup>

Beginning with Heather Paxson’s “microbiopolitics” and Donna Haraway’s questioning of what it might mean to “nourish indigestion,” I write beside *Invisible Earthlings* to ask how food and eating are practices of paying attention, curing, and killing at once. *Dying for the Other* and the *Anti-cancer Survival Kit* were made after da Costa’s 2009 diagnosis of metastatic breast cancer and emerge from her concern with “the cost of life”—her last works were grouped under this umbrella project title and, in addition to *Dying for the Other* and the *Anti-cancer Survival Kit*, include *The Life Garden* (2011) and *The Delicious Apothecary* (2012). These four works approach anticancer survival, and follow on from works addressing death and extinction. *Endangered Species Finder* (2009) is a mobile application that encourages users to have direct encounters with endangered species, promoting a “‘go out and meet the species before it’s too late’ attitude.”<sup>6</sup> The app was released alongside da Costa’s exhibition *Memorial for the Still Living* (2009), an installation at the Horniman Museum and Gardens focused on critically endangered but “still living” British plants and animals. The installation imagines a time when interacting with preserved specimens will be the only possible way to encounter these species, which have each been assigned a “death date” anticipating the time left before extinction. Moving from these works into the *Cost of Life* projects, *The Life Garden* and *The Delicious Apothecary* promote a different kind of multispecies engagement, examining anticancer diets as an interface between plants and human health. Both works present plants known for their anticancer properties, first as a living garden and then as a medicine cabinet stocked with dried and preserved herbs ready to be used in a series of anticancer cooking classes that accompanied the exhibition of these works.

In their book, *Malignant: How Cancer Becomes Us*, S. Lochlann Jain also considers the cost of life. Jain questions “the objectivity of cost-benefit equations,” observing that “when human motivations puncture cancer data, some sobering questions spew out. What cost is worth what benefit, and to whom? When? Why?”<sup>7</sup> Da Costa’s *Cost of Life* projects join Jain’s writing about their own cancer and cancer as a cultural and political force, seeking to understand cancer as, in Jain’s words, “a set of relationships—economic, sentimental, medical, personal, ethical, institutional, statistical.”<sup>8</sup> I have wanted to write about da Costa’s *Cost of Life* projects for several years, but I did not know how to approach the work until I read both Jain’s book and Elizabeth Wilson’s *Gut Feminism*. Jain proposes an “elegiac politics—a stance that admits to the inevitability of [cancer] deaths given the environmental and economic landscape” and “demands the recognition of

5. Sokoloff, “Problem of Cellular Anarchy.”

6. Arts Catalyst, “Memorial for the Still Living.”

7. Jain, *Malignant*, 175.

8. *Ibid.*, 4.

both enormous economic profits and enormous cultural and personal losses.”<sup>9</sup> Elegiac politics focus on individual experiences rather than abstract collective cures by attending to individual deaths, as elegies must do. Wilson’s feminisms are also lamentations that “offer no plans for repair except through the interpretation of our ongoing, anxious implication in envies, hostilities, and harms.”<sup>10</sup> I consider da Costa’s reckonings with extinction and cancer in the *Cost of Life* projects to be aligned with Jain’s elegiac politics and Wilson’s assertion that *Gut Feminism* is “resolutely anticonsilient—empirically and politically.”<sup>11</sup> Consilience signals agreement and concordance, suggesting that evidence from many sources might be brought together to strengthen conclusions across disciplines. That which is anticonsilient is not simply against agreement; for Wilson, “dissonant hypotheses” allow the harms and hostilities present in feminist discourse to coexist without reconciliation, akin to Jain’s efforts to “make [cancer] *more* difficult, . . . make it everywhere, . . . proliferate its meanings so that all those . . . flowcharts and path reports and injunctions to hang in there don’t get the last word.”<sup>12</sup> Although the *Cost of Life* projects address different medical diagnoses and concerns than those of *Gut Feminism*, da Costa traverses much of the same theoretical terrain Wilson maps in her book. The *Cost of Life* projects are relentlessly anticonsilient and antiauthoritarian. The guts digesting da Costa’s anticancer meals are organs of mind that refuse accord and agreement, allow for unhappiness and rage, and topple accepted hierarchies of authority. Animated by bile, toxicity, frustration, in da Costa’s words, “more than even I can take,” these projects offer a feminist politics that does not deny or turn away from death and fatal harm.<sup>13</sup> Jain, Wilson, and da Costa carve out space for a symbiotic understanding of life and its costs that undoes patriarchal capitalist formations of essential identity.

*Dying for the Other* presents three channels of video footage from testing environments, including laboratories, hospitals, kitchens, and living rooms. We see da Costa performing physical therapy exercises, chopping vegetables, and walking hospital halls. These labors accompany footage of tumorous pink mice wriggling in their cages, living and dead mice weighed and handled by researchers, and the materials of laboratory and medical work: test tubes, petri dishes, scalpels. The collected activities and productivities depicted in *Dying for the Other* attend to shared suffering, remedy, and harm. With Jacques Derrida and Isabelle Stengers, I understand the tension between benefit and harm depicted in *Dying for the Other* to be the same tension that animates the *pharmakon*, that which cures, harms, is blamed, and is indeterminate. The triptych enacts what Stengers calls “the question of relation,” which “endures as an enigma in the very

9. *Ibid.*, 223.

10. Wilson, *Gut Feminism*, 179.

11. *Ibid.*, 170.

12. *Ibid.*, 170; Jain, *Malignant*, 223 (emphasis in text).

13. da Costa, “Directly from Me.”

heart of medicine.”<sup>14</sup> I look to my and Catherine Lord’s tactics for viewing the video, alongside curatorial strategies for displaying the work, to better understand questions of relation between cancer, care, and visibility in *Dying for the Other*, and how cancer has a life of its own.

Alongside *Dying for the Other*, da Costa developed the *Anti-cancer Survival Kit* (2013), a project that would be realized posthumously with the help of immediate collaborators Crys Moore, Maria Michails, Pamela Mendoza, Johnny Lu, Donald Daedalus, Frank Peter, Michelle Fuerst, Robert Nideffer, Jamie Schulte, and Lucinha (da Costa’s therapy dog) and contributions from 118 RocketHub crowdfunders.<sup>15</sup> The survival kit’s prehistory can be seen in *Dying for the Other* while da Costa works in her kitchen, unpacking and prepping her groceries. Attending to the practical processes that animate the kit, I examine figurations of microbiomes as ecosystems to investigate how cultures of cancer further both Wilson’s desire for “sustained attention [to] the nature of attacking, sadistic impulses, and the difficulties of how to live (and politick) with them” and Scott Gilbert, Jan Sapp, and Alfred Tauber’s call for “intermingled symbiont relationships.”<sup>16</sup> Food becomes an exemplary site of this more-than-human intermingling, with eating becoming what Hannah Landecker would describe as “exposure.”<sup>17</sup> As with *Invisible Earthlings*, *Anti-cancer Survival Kit* is a vast, sprawling project, encompassing online databases and recipe archives and tangible objects like ceramic mugs, grocery bags, wooden spoons, seeds, tea, grow lamps, cutting boards, and flower boxes, among other things. The kit produces an eating body by asking where food comes from and how food might have pharmacokinetic effects across bodies and environments.

Throughout this article, especially when considering specific installations and manifestations of these artworks, I write as an embodied person sharing space with the work. In *Malignant*, Jain’s cancer compels them to write in first-person about their experiences. For an anthropologist, this decision is not without risks. Jain describes their choice as a leap: “after looking long and hard from the canoe for seven years, I’ve leapt into the white water.”<sup>18</sup> The white waters of this essay are less fraught than the terrain Jain navigates, but my reasons for jumping in are similar: the political power of da Costa’s last projects deepens by physically inhabiting them in order to connect with what Jain refers to as “cancer discussions that we’d rather hide from.”<sup>19</sup> I take up autoethnography as a way of “writing otherwise,” a practice that is important to feminist science and technology studies scholars, including da Costa herself.<sup>20</sup>

14. Stengers, *Cosmopolitics I*, 30.

15. Moore, “Beatriz da Costa RocketHub Video.” I was one of the project’s funders.

16. Wilson, *Gut Feminism*, 71; Gilbert, Sapp, and Tauber, “Symbiotic View of Life,” 336.

17. Landecker, “Food as Exposure,” 167.

18. Jain, *Malignant*, 22.

19. *Ibid.*, 21.

20. Stacey and Wolff, eds., *Writing Otherwise*.

### ***Invisible Earthlings: Microbiopolitics in the Garden***

With *Invisible Earthlings*, da Costa asks, “How can a revived ‘environmentalism’ function if we deny it the existence of billions of actors?” Da Costa became interested in microbes beyond those that make headlines and receive human attention, that is, the vast majority of microbes going about their lives without causing harm to human health and property. With this question, she figures these overlooked beings as potential contributors to a flagging environmental movement. If only environmentalist discourse could draw energy from this uncountable, vast liveliness. To draw out the capacities of invisible earthlings, da Costa begins by asking “what type of activities are the numerous relatives of these so-called ‘harmful microbes’ performing while we are walking by, stepping right on top of them or are busily shopping for ‘mold resistant’ building materials?” She begins to answer this question in her own garden. Her first iteration of the project involved sampling her immediate environment and seeing the invisible with the aid of technologies of visibility, including petri dishes, photography, and animation. Subsequent iterations extended her solitary sampling into a communal workshop format with students. Along the way, da Costa found “histories of human ‘use,’ ‘awareness,’ and ‘handling’ of these organisms, . . . for example, *penicillium* was found on many occasions, and while most people know that penicillin was originally derived from a strain of the *penicillium* mold, fewer might realize that one of its relatives is lively and active in the production of camembert.”<sup>21</sup> The example of *penicillium* shows how feral microbes enliven unexpected sites with their cultural and culinary histories. The project yielded processes and outputs that included collaborative microbiological analysis, sculptural installations of petri dishes (fig. 1), and video documentation of collection sites.

*Invisible Earthlings* takes a microbiopolitical approach. Heather Paxson developed the term “microbiopolitics” to navigate “the recognition and management, governmental and grassroots, of human encounters with the vital organismic agencies of bacteria, viruses, and fungi.”<sup>22</sup> Paxson elaborates on microbiopolitics some years after coining the term, “offering microbiopolitics as an idiom for describing and analyzing regimes of social management that admit to the vital agencies of nonhumans, for good and bad.”<sup>23</sup> By activating everyday spaces—the backyard, the gutter, the kitchen drain—da Costa articulates the regimes of social management that are employed to control microbial life. Microbial life creates us: the project illuminates the ways that humans culture the harmful and the harmless through limited forms of description and analysis that typically ignore the harmless microbial majority, let alone the complex ways that microbes might act with autonomy in registers outside of human perception. Paxson cautions that an uncritical embrace of “post-Pasteurian” modalities might make animals and their environments unnecessarily sick. Da Costa embraced the cautious affection Paxson

21. da Costa, *Invisible Earthlings* (2008–9).

22. Paxson, “Post-Pasteurian Cultures,” 18.

23. Paxson, “Microbiopolitics,” 119–20.



Figure 1. Beatriz da Costa, *Invisible Earthlings* (2008–9), installed at Fafa Gallery, Helsinki, 2008. Used by permission of Robert Nideffer.

advocates even and especially as she, alongside laboratory mice and the planet, became extremely sick. *Invisible Earthlings* was exhibited at UCLA in 2009, the same year da Costa learned that after years of remission, her struggle with cancer would continue with a diagnosis of stage IV metastatic breast cancer. Within a year, the cancer would move to her brain.

The collection and analysis activities of *Invisible Earthlings* illuminate symbiotic relationships by making microbes visible as relational companions or social actors. *Invisible Earthlings* responsibly gathers, cultures, and imagines worlds; the project builds affective and physical alliances cooperatively through surface encounters that promote the extension of affective ties to very tiny companions.<sup>24</sup> A microbiopolitics of anti-authoritarian resistance begins with *Invisible Earthlings* and fully unfolds in da Costa's dialogues with cancer. Cancer and microbes are different in their biological classification, activities, and effects, but because microbes can be "important causes of human cancers," microbial investigations are intimately linked with cancer prevention.<sup>25</sup> If we can find and appreciate microbes beyond the alarmist readings da Costa seeks to move away from, might we broaden this practice of making tiny relationships visible

24. Ronald Broglio theorizes "surfaces" as "sites of productive engagement with the animal world"; Broglio, *Surface Encounters*, xvii.

25. Blaser, "Understanding Microbe-Induced Cancers"; see also Sears and Garrett, "Microbes, Microbiota, and Colon Cancer"; Moss and Blaser, "Mechanisms of Disease."

by performing similar actions with other very small, less visible forms of life? Forms of life like cancer?

### **Research Organisms *Dying for the Other*: Please Don't Kill Us!**

To better understand how cancers might be considered invisible earthlings, I'd like to dwell for a moment in the exhibition space where I spent the most time with *Dying for the Other*, engaging artist LuYang in the process. As installed at "DeMonstrable," a 2015 exhibition at the Lawrence Wilson Art Gallery, University of Western Australia, curated by Oron Gatts with Jennifer Johung and Elizabeth Stephens, da Costa's *Dying for the Other* triptych quietly cycles through its thirteen minutes at one end of a cavernous space.<sup>26</sup> The three channels fade in and out, occasionally going dark, offering an ambient, subdued soundtrack of everyday therapeutic gestures in the lab and at home. LuYang's *Cancer Baby* (2014–15) sparkles opposite (fig. 2). *Cancer Baby* spills out of a wall projection, metastasizing throughout the room with sculptures and prints that extend the fluorescent palette of a frenetic, cheerful dance animation featuring anthropomorphic *kawaii* tumors who sing:

Cancer cancer cancer cells!  
 We are happy cancer cells!  
 We are living cancer cells!  
 We stay inside your body!  
 We are big family!  
 Sister and brother!!!  
 We glow [sic] up very very fast!  
 Super super fast!  
 You will never notice that!<sup>27</sup>

*Dying for the Other* holds the other end of the room in a slow, low-volume vacuum, despite its proximity to the exuberance of *Cancer Baby*. In one moment, da Costa splits a pill on the left channel while the camera holds dead mice in a close frame in the center; to the right, da Costa stands at her kitchen counter and chops dark leafy greens. Some minutes later, chopped vegetables mirror dissected animals while human handlers attend to the mice and to da Costa with tenderness and care. The support offered to da Costa as she walks down a hospital corridor recalls the gentle efforts of laboratory technicians to shift wriggling mouse bodies around when a cage is reconfigured and the tender pinning of dissected bodies to better open and display their tumors. Speaking about *Dying for the Other*, Donna Haraway observes that "kale are research organisms . . . every bit as much as that mouse."<sup>28</sup> Material semiotics of cancer unfold across research-organism

26. Lawrence Wilson Art Gallery, "DeMonstrable."

27. LuYang, "Cancer Baby by LuYang."

28. FemTechNet, "Feminism, Technology, and Transformation."



Figure 2. LuYang, *Cancer Baby* (2014–15), video still. Used by permission of the artist.

life worlds: the pharmacokinetic pill opens up pathways for the dead bodies of research animals inside da Costa's dying body while the greens suggest how the pill could be food and how food could be what Hannah Landecker would call "an immersive environment."<sup>29</sup>

As I sat on the floor, pen and notebook at hand, determined to endure the entire thirteen minutes of da Costa's triptych, I was grateful for *Cancer Baby*. I imagine da Costa enjoying the humor of *Cancer Baby* and its proximity to and effect on her work. Writing this essay, I flip back and forth between a rough cut of *Dying for the Other* and my text, unable to stay with da Costa's delayed reflexes and tired body for more than fifteen seconds at a time.<sup>30</sup> At a panel discussion about the "DeMonstrable" exhibition, curator Oron Catts recalled how da Costa knew the work was difficult to watch and should be offset.<sup>31</sup> When showing the video's early edits, she made sure to have another screen active nearby. The moment of looking away becomes an integral part of viewing the work. When I look away, I knowingly break uneasy connections between da Costa's body, the bodies of the mice, the food, assisted living and dying as lively processes. Even familiar scenes of preparing greens and vegetables in the kitchen become difficult to watch when held between the bodies of vulnerable pink mice flayed and pinned to foil boards. My peripheral vision undermines my attempts to stay focused on one scene versus another, and the triptych's structure forces me to watch certain things by either collapsing into a single frame or iterating three simultaneous views of the same scene. In

29. Landecker, "Food as Exposure," 190.

30. da Costa, "Dying for the Other."

31. Stephens, Catts, and Johung, "DeMonstrable."

this way, the installation's structure forces the visitor to develop viewing tactics if they choose to stay longer than a moment or two. These viewing tactics expose ethical engagements with animals and illness.

Catherine Lord reflects on her viewing tactics in a panel discussion on *Dying for the Other* that took place shortly after da Costa's death. Lord focuses on the mice rather than "my colleague re-learning basic cognitive skills and doing yoga light."<sup>32</sup> Lord chooses the mice because "it is less painful emotionally, but also because it is somewhat erotic," their naked, bulging, lumpy bodies evoking genitals; their inert cylindrical corpses become textured dildos.<sup>33</sup> I adopt a similar strategy by following one thing as a way through the triptych, but unlike Lord, I stay with the kitchen scenes. Unlike scenes of struggle with speech, walking, or even Lord's "yoga light," da Costa engages with the vegetables with certainty. Her hands move with the same confidence as the hands of the cancer researchers, knowing what tools are needed and when. This is why I stay with the kitchen scenes; like Lord following the mice, it is less painful emotionally. I turn away from mice to kale, and that look cuts, recalling the ways in which mice and kale go under the knife together in anticancer research creation.

If the bald pink mice have materially moved into da Costa's body through a deft game of pharmacological cat's cradle, so too have LuYang's cancer babies. Cancer babies are invisible earthlings made hypervisible. As with da Costa in her garden, LuYang finds invisible earthlings by sampling several locations. She locates cancer babies in kidneys, brain, uterus, breast, stomach, heart, bladder. A scene from *Dying for the Other* where a researcher chases a pea-sized bouncy tumor around a petri dish with a scalpel recalls the rubbery resilient appearance of LuYang's sculptures. I imagine that dissecting one of these round, soft-looking blobs would produce similar difficulties with pinning down and stabilizing the material. Recalling her finding and appreciating invisible microbial earthlings, da Costa peers into the realms of tiny cancerous messmates at table, while LuYang makes them large. Cancer babies are growing very very fast throughout da Costa's body; they are happily proliferating across environments as they bounce between the two installations, between screens, between mice, kale, and humans. LuYang's babies cry, "Please don't kill us!" while da Costa does all she can to slow their progress.

### **Terrain, Diet, and the Anticancer Mess**

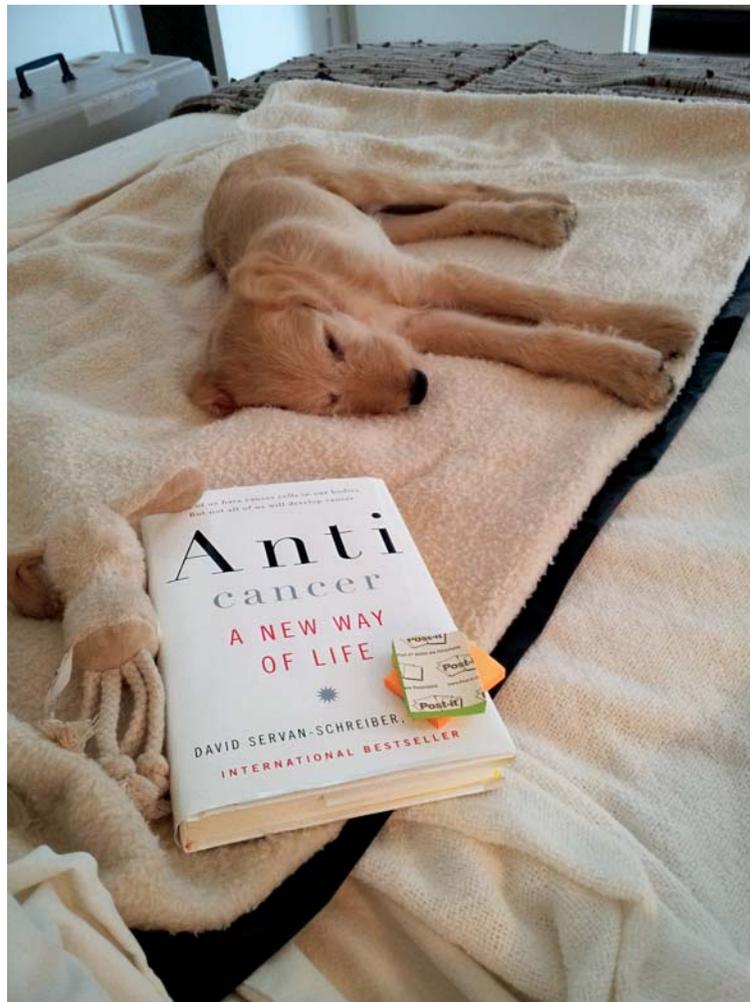
Diet has become an important site of control and prevention for cancer patients. "Food as medicine" would seem to be an ancient truism, but culinary approaches to health are constantly reinvented in an amnesic health-care system that neglects food and eating in cancer treatment.<sup>34</sup> While developing a database of edible anticancer plants and recipes to help other cancer patients with their dietary interventions, da Costa read

32. FemTechNet, "Feminism, Technology, and Transformation."

33. *Ibid.*

34. For medical perspectives on the food industry, see "Big Food," *PLOS Medicine*.

Figure 3. Beatriz da Costa's dog Lucinha with her copy of *Anticancer: A New Way of Life*. Photo: Beatriz da Costa.



David Servan-Schreiber's *Anticancer: A New Way of Life*, the book most responsible for introducing “anticancer” as a household word and the most recent effort to remind health-care systems that food heals (fig. 3). Servan-Schreiber, a psychologist and brain cancer patient, describes the connections between mind, body, and food as “terrain,” language that evokes landscape metaphors for the human microbiome and symbiotic interrelations more broadly conceived. “Terrain” closely aligns with food, recalling “terroir,” the taste of place, and implying that “improved terrain” is more vibrant, fecund, and supportive of life—more agriculturally receptive.<sup>35</sup> With da Costa's juxtaposition of pills, mice, and greens, I will turn to terrain and cultivating terrain in *Dying for the Other*, beginning with the simple observation that pills and greens enter the same mouth and

35. Servan-Schreiber uses “terrain” throughout the book, with its first use in the introduction to the 2007 edition reading “this type of medicine . . . works with the ‘terrain’ at the same time that it addresses the disease.” Terrain is the context for disease, and is more than a body: terrain includes epigenetic factors, like Landecker's “food as exposure”; Servan-Schreiber, *Anticancer*, 2.

pass through the same guts and viscera. Returning to Landecker and nutritional epigenetics, the shift from understanding metabolism as an engine channeling transubstantiated caloric energy to understanding the relational responsiveness of the body to nutritional surroundings suggests that “if the body is open to environment, then it is open to environmental intervention.”<sup>36</sup> The nutritional environment of *Dying for the Other* contains pills, greens, mice, and their often-overlooked synthetic laboratory diets. “Terrain” approaches to cancer entail thinking about nutrition alongside pharmacokinetics—how drugs move through and are absorbed by the body—and the ways in which the body can be cultivated, like soil. While acknowledging both that the pills and greens seen in *Dying for the Other* depart from Elizabeth Wilson’s careful attention to antidepressants and that her scholarship is not intended to be easily portable, I will suggest that da Costa’s anticancer politics are kin to Wilson’s commitment to anticonsilient feminist theories.

In a brief statement about the project, da Costa frames *Dying for the Other* in terms of mess, the mess that implies disorder and also mess as a condition of possibility. She addresses “the messiness embedded in the practice of maintaining one kind of life by killing another” and “attempts to give this messiness a form that disallows simple rationalization.”<sup>37</sup> As Donna Haraway reminds us in *When Species Meet*, “mess” is also a place, a site where we eat together and “nourish indigestion.” In *Dying for the Other*, the mess spreads from kitchens to laboratories and hospitals, each a scene of indigestion and pharmacokinetic nourishment. Da Costa aligns herself with Haraway’s approach to laboratory experiments to draw out the cancer patient’s messy kinship to mice. Haraway writes:

I do not oppose carefully considered invasive research with mice. My question is not that but how to engage in such practices face-to-face, inside the mortal knot of becoming with other animals. I find it collectively psychotic, and highly functional, to deal in rhetorical and other research practices as if the mice were only tools or products and not also sentient fellow critters. The both/and is very hard to hold onto. . . . The problem for companion species, I argue, is not how to be satisfied but how to handle indigestion.<sup>38</sup>

*Dying for the Other* holds onto Haraway’s “both/and” by attending to the ways in which mice, kale, humans, and pharmaceuticals are (in)digested. Seth Hawkins observes that juxtaposing human bodies undergoing physical therapy beside mouse bodies undergoing dissection and sacrifice “make[s] a very dark link between the animals we use as proxy for our suffering and how little we really know about certain diseases.”<sup>39</sup> Research animals live, die, are sacrificed, are together and apart in their lives and deaths, and move across bodies, including da Costa’s, each other’s, and their researcher caretakers.

36. Landecker, “Food as Exposure,” 179.

37. da Costa, “Dying for the Other.”

38. Haraway, *When Species Meet*, 339 n34.

39. Hawkins, “Staggering Works.”

This pharmacokinetic trace and touch prevent these bodies and psyches from inhabiting essentialist identities. Mice bodies touch human bodies through medicine, through research, through the gut, through Hawkins's "proxy," and through what Haraway names as "sharing suffering."<sup>40</sup>

We are "messmates at table," eating food and pills in the presence of one another. Mice and humans share our exposure to food, our responses to the nutritional environment, our pharmacokinetic ingestions, and indigestions. Haraway's call to "handle indigestion" and its knowledge-making capacities evokes Wilson's commitment to the gut as an organ of mind. *Dying for the Other* manifests these relations by combining a close up of da Costa splitting a pill with a sacrificed mouse with a bag full of kale. Eating in the anticancer mess prompts a consideration of the pharmacokinetic capacities of kale and of all foods: ingestions are ambivalently prescriptive. Writing about *Dying for the Other* in her book *Diffraction Technoscience*, Federica Timeto dwells in these ambivalences: "Anatomy locates the topography of disease inside bodily boundaries, but a disease and thus a cure are part of life, and, as . . . da Costa's works show, are always done in practice, exceeding the realms of the seeable and the sayable within which bodies have been confined by traditional medicine."<sup>41</sup> Timeto finds that da Costa's work unleashes an "ecosystemic" multiplicity: "living and dying is not only for the other, but also with the other and with/in the other. Thus, being cured and assisted also necessarily means assisting in turn, paying attention, taking care, being respectful."<sup>42</sup> Timeto's language recalls Stengers's assertion that the *pharmakon* is a way of paying attention.<sup>43</sup> Attention makes the difference between remedy and poison. Kale and medicine infect one another with uncertainty about the beginnings and endings of bodies, diseases, and medications.

Wilson opens "The Pharmacology of Depression," the last chapter of *Gut Feminism*, with Derrida's observation that "there is no such thing as a harmless remedy. The *pharmakon* can never be simply beneficial."<sup>44</sup> The *pharmakon* reveals the ways in which diseases are forms of life. LuYang's *Cancer Baby* exemplifies this: cancer has its own exuberant agenda, wanting to sing and dance happily, invisible and unnoticed. Cancer babies perform what Derrida calls "the life of the sickness," a life that might be threatened or enhanced by the *pharmakon*: "In disturbing the normal and natural progress of the illness, the *pharmakon* is thus the enemy of the living in general, whether healthy or sick."<sup>45</sup> The *pharmakon* does not necessarily discipline illness; instead, the *pharmakon* performs boundary work that will only succeed in recalling the complexities of "living in general" by showing the ways in which life, cancerous and otherwise, multiplies. An

40. Haraway, *When Species Meet*, 83.

41. Timeto, *Diffraction Technospaces*, 147.

42. *Ibid.*

43. Stengers, *Cosmopolitics I*, 100.

44. Derrida, "Plato's Pharmacy," 102.

45. *Ibid.*, 102.

attempt to reconcile or impose order on lively illnesses can only illuminate their complex ways of persisting, living, and resisting. Stengers enfold the *pharmakon* into the heart of her cosmopolitical incursion on the modern tradition, noting that “we require a stable distinction between the beneficial medicament and the harmful drug, between rational pedagogy and suggestive influence, between reason and opinion.”<sup>46</sup> The *pharmakon* disrupts all of these requirements with an antiauthoritarian instability, a relationality that threatens. In 1929, Boris Sokoloff wrote about “The Problem of Cellular Anarchy,” asking after the relationship between cellular membranes of cancerous tissues and tumor malignancy.<sup>47</sup> Although the vocabulary of “cellular anarchy” has disappeared, I appreciate how Sokoloff’s cellular anarchy acknowledges the political life of cancer. Anarchist struggle at the cellular level evokes the *pharmakon*’s wavering against the stability of pharmacology, medicine, and even “anticancer,” which offers its own leafy green set of longed-for certainties. In this way, the *pharmakon* provides a path into anticonsilient, antiauthoritarian models of self-care.

Wilson cultivates feminisms that “offer no plans for repair except through the interpretation of our ongoing, anxious implication in envies, hostilities, and harms.”<sup>48</sup> Regarding cancer as a hostile, fatal harm, da Costa’s *Dying for the Other* enacts anticonsilient engagements with Wilson’s articulation of the gut as “an organ of mind: it ruminates, deliberates, comprehends.”<sup>49</sup> Wilson’s analysis emerges from discourses around antidepressants, specifically selective serotonin reuptake inhibitors (SSRIs). These drugs are discussed as if they interact directly with the brain, ignoring the ways in which guts, viscera, and bile take in and manipulate SSRIs. For Wilson, considering the gut as a first responder not only to SSRIs but also to emotions, affect, and feminist struggle undoes psychic boundaries within the human body, putting psychoanalytic and pharmacokinetic theories of the visceral and the corporeal into dialogue. Landecker’s work on nutritional epigenetics productively complicates Wilson’s consideration of pharmacokinetic politics. With Wilson reminding us that our guts are a site of drug and political receptivity, Landecker’s responsive environment extends to include Wilson’s links between the pharmacological, affect, and feminist struggle.

And yet, to spin out from Wilson’s concern with Eve Kosofsky Sedgwick’s framing of reparative and paranoid readings, *Dying for the Other* resists that distinction—da Costa and the mice and all their harms and cures, to borrow elsewhere from Sedgwick, are literally beside one another in the video installation. Sedgwick compares “beside” to sharing a bed with a sibling, noting that “beside is an interesting preposition because there’s nothing very dualistic about it; a number of elements may lie alongside one another, though not an infinity of them.”<sup>50</sup> Wilson negotiates the paranoid and the reparative,

46. Stengers, *Cosmopolitics I*, 29.

47. Sokoloff, “Problem of Cellular Anarchy,” 246–81.

48. Wilson, *Gut Feminism*, 179.

49. *Ibid.*

50. Sedgwick, *Touching Feeling*, 8.

the harm and the cure, and comes up with “dissonant hypotheses” as a way to think remedy beside harm. In *Dying for the Other*, “conventional ambitions for amelioration or reparation lie gutted,” as gutted as the sacrificed mice laboring to develop tumors and drugs.<sup>51</sup> *Dying for the Other*’s anticonsilience emerges in its form as much as in its content. The triptych format and the way the editing forces attention across and away from the scenes of mice, food, drugs, therapy, balance produces the understanding that even as repairing and curing justify each activity, these actions and images relate, but not through a framework of reparation. Amid all of this the kitchen scenes assure me that even if she can no longer count backward, da Costa knows what to do with vegetables. For Servan-Schreiber and da Costa, the gut is a first responder to cancer: food has the capacity to shift the terrain or environment of the body.

Writing in a private blog designed to disseminate news of her health to friends and family, da Costa relates a moment of struggle with food. In the context of unexpected weight loss, a further ten pounds after an initial ten pounds following a surgery, da Costa observes that “since food is one of the few things that I can do to at least attempt to keep all those nasty micro-metastases in check, ‘ordering in pizza’ isn’t such a good idea in my case.”<sup>52</sup> In *Dying for the Other* and in this blog post, da Costa recognizes the gut as an organ of mind: food provides a direct link to her brain cancer. Gut politics—bile, melancholia, multibiomic indigestions—are already against orderly consilience. Granting the gut direct connection to the mind undoes some of the mind’s authority. Wilson demonstrates the nuances of this anticonsilient approach to SSRIs, and from a different starting point, Servan-Schreiber and da Costa share her shift in register from brain to gut. Distinct from the abstract processes of cognitive understanding, thinking guts allow for practical culinary possibilities, edible choices shift into autonomy and even anarchist self-care. Servan-Schreiber would prefer that his approach to cancer treatment be seen as complementary to traditional treatments, yet his own narrative of understanding the “terrain” model and researching alternative pathways has an anarchist sensibility. He learned about terrain from a friend who practices alternative medicine, and he ignored her first attempt to query how he was caring for his body as one component of a complex landscape that includes mind and environment.<sup>53</sup>

51. Wilson, *Gut Feminism*, 179.

52. Even eating well requires help. Soon after that post, a collaborative meal delivery system was in place for da Costa, but when her building lost power during Hurricane Sandy, eating well became one of the most difficult things, without power, water, heat, or the capacity to walk fourteen flights of stairs; da Costa, “No Sweet Talk This Time.”

53. “One afternoon I was having tea with one of the few friends who knew about my illness. We were talking about the future, when she said to me hesitantly, ‘David, I have to ask you—what are you doing to treat your “terrain”?’ She knew I didn’t share her enthusiasm for herbal medicine and homeopathy. To me, this concept of ‘terrain’ (my lifestyle and environment taken as a holistic whole)—which I’d never heard of in medical school—was outside the confines of scientific medicine. I wasn’t interested in the least. I told her that I had been very well looked after, and nothing remained to be done other than hope that the tumor wouldn’t return. And I changed the subject”; Servan-Schreiber, *Anticancer*, 114.

Servan-Schreiber did not immediately become interested in terrain; it took a relapse of his brain cancer before he stopped eating bagels daily and became sensitive to the life of his illness. As he was a psychologist trained in mainstream Western medicine, taking terrain seriously must have been for him one of the most antiauthoritarian approaches to self-care. Clinicians, unwilling or unable to answer Servan-Schreiber's questions, absent themselves. Informed and insulated by the rigors of his medical training, Servan-Schreiber finds a careful freedom in their absence.

### **Cellular Anarchy in the *Anti-cancer Survival Kit***

Turning to da Costa's posthumously produced *Anti-cancer Survival Kit* to respond to Wilson's invitation to work against unification, I ask how the environmentally responsive gut might be an active agent in anticonsilient, antiauthoritarian theories of self-care, and how anarchist theories of self-care contribute to a cancer politics that resituates the place of humans in cancer discourse. Described as "a multimedia art kit for people living with cancer, their family and friends, and anyone else who wants to avoid getting cancer in the first place," the kit was produced by a team of artists, chefs, programmers, and a therapy dog.<sup>54</sup> The collaborative process and team behind the kit would not be remarkable or unusual in the technology-art space da Costa inhabited, but given her health, this collaborative process functioned differently and mattered more: the development of the kit became a tangible outcome of and aid to assisted living. The kit was distributed to individual homes, and distribution was designed to be both large-scale and digital, with websites and mobile apps, as well as local and analog, with cutting boards and wooden spoons. The kit format matters: kits hold a productive tension between authority and freedom. While an expert manufacturer has assembled the kit, kits also invite subversion. Writing about the phenomenon of biotech kits that, for example, allow users to culture cells and create genetic modifications, da Costa observes that kits and cooking have much in common: "Similar to the pleasures of cooking one's dinner or fixing up one's house, the act of making, building and simultaneously learning seems to be an appealing and desirable way of spending spare time for those who can afford doing so."<sup>55</sup> Here the kit connotes pleasure, leisure, the nicer aspects of housekeeping, and, given the biotech content of the kits da Costa refers to, something more: an element of subversive knowledge transfer. Alongside da Costa, elsewhere I have considered the politics and histories of kits in food art, from FLUXUS kits to contemporary DIY movements, noting that "kits and recipes encourage the movement of protocols and substances from laboratory to kitchen and back again, remaking and connecting professional and amateur spaces."<sup>56</sup> That a kit traverses these spaces might seem incidental, but this freedom of movement between different sites of production

54. Moore, "Beatriz da Costa Rockethub Video."

55. da Costa, "Reaching the Limit," 373.

56. Kelley, *Bioart Kitchen*, 74.

unsettles the kit's claim to expert authority and undermines efforts to separate the home from the factory or the laboratory.

Crys Moore wrote about her work on the *Anti-cancer Survival Kit* in her essay "Art in the After," asking "How does one continue an artist's work posthumously?" Posthumous work has a necessarily anarchist sensibility in the absence of the organizing authority of active authorship. Moore writes that "the kit was motivated by Beatriz's own experiences and desire to share information that she wished she'd received earlier on."<sup>57</sup> Moore helped launch the crowdfunding campaign that would finance the project; da Costa died only a few weeks after the launch. Moore continued working with the team da Costa had assembled before her death, chronicling the difficulties of working on the project without da Costa. Perhaps because of the "rewards" structure of crowdfunding campaigns, where funders at different levels receive different material benefits, the *Anti-cancer Survival Kit* had a lot of parts. The project includes stickers, patches, notebooks, pens, artist books, e-books, kitchen towels, games for mobile devices, indoor gardening kits with seeds, tea, chocolate, tote bags, wooden spoons, cutting boards, limited edition cases, and limited edition prints. My contribution entitled me to almost all of these things. Without da Costa's involvement, the artist's book could not be authored, and funders received instead an anticancer recipe book containing recipes compiled by da Costa and chef Michelle Fuerst. Although the kit was included in "ex-*pose*," a 2013 exhibition of da Costa's work at the Laguna Art Museum, the project's liveliness comes from its distributed, networked form. With mixed feelings, Moore chose to display the kit's elements in glass vitrines but noted a "tension between the vitrined display and Beatriz's intentions."<sup>58</sup> Vitrines become a barrier preventing visitors from touching and interacting with the kit, dampening the impact of work activated by tactile encounter and distribution across far-flung kitchens.

As far as I know, the *Anti-cancer Survival Kit* exists only as a reward for crowdfunding, and except for the exhibition, was not distributed in any other form. The rewards structure combined with the kit format produces a multiplicity and a productive instability: there is no definitive kit, there are many kits, some with more and rarer components, some with fewer components. I felt this instability more, perhaps, than other funders because my kit came into my possession over the course of three separate trips between the United States and Australia. First my father brought back some of the kit's components (including, unbeknownst to him, the seeds that prevented the package from being shipped to Australia). Then, noticing that the grow-light lamp was 110 v, I returned the lamp to the United States. Finally, I found the cutting boards and spoons, which had been left behind by mistake. Instead of "unboxing" a complete package, my kit trickled in. Unlike the DIY biotech kits da Costa writes about above, if my *Anti-cancer Survival Kit* is missing a component, I am still able to fulfill the kit's purpose. There is nothing specific to build or attach or create from the kit; the focus is on terrain,

57. Moore, "Art in the After."

58. *Ibid.*



Figure 4. Top: Logo for the *Anti-cancer Survival Kit*. Bottom: Anarchy symbol by Enon.



nebulous and material at once. I think of the kit as a scattering, across countries and homes, mine and those of other funders. This language again evokes anarchist modalities, with distribution mattering more than centralization.

Even though few of the components are unique or one-of-a-kind, because they have been branded with the *Anti-cancer Survival Kit* logo, each component enacts a conceptual shift whenever it is used. Evoking the anarchist symbol, the *A* for *anarchy* piercing a circle representing order or the world, the *Anti-cancer Survival Kit* logo crosses a carrot over a spoon, overlaid on what might be a chain of monomers with an open branch (fig. 4). If I use a mug or a cutting board without the *Anti-cancer Survival Kit* logo, I am less likely to think about whether or not my tea or my food have anticancer properties. If I use the same objects from the kit, the simple addition of the project's logo

makes me think twice about adding industrially farmed milk and white sugar to my tea, and fills me with the perhaps disappointing knowledge that I should be using the cutting board to chop kale instead of slice cheese. The association of “anticancer” with diet has penetrated popular consciousness to such a degree that many people, including people who have not read Servan-Schreiber’s book, now understand how diet might matter to cancer survival, even people like me whose cancer cells lie dormant for the moment. After reading da Costa’s introduction to the *Anti-cancer Survival Kit* project, one would have an understanding of both “anticancer” and “survival” that would be sympathetic to Servan-Schreiber’s and da Costa’s positions.

Yet, the anticancer position is a complicated one. “Anticancer” and “survival kit” modify each other in at least two ways. The title both makes the kit part of a set of anticancer activities and works the opposite way as well, an opposition that further illuminates the project’s anticonsilience and antiauthoritarianism. Kit users do not only survive cancer, they also survive anticancer. If the lives of illnesses reveal themselves as dangerous supplements, anticancer must also have deconstructive force and must enact its own harms and cuts. Looking to Edelman’s reading of Sedgwick and his insistence that the reparative reading bears its own hostilities, Wilson finds that the tension between remedy and poison offers a path into what anticonsilient engagement might turn on or resemble. Derrida unravels the *pharmakon* to suggest that diseases and cures have multiple, entwined lives. Curing and assisting are always positioned in relation to living and dying, supplementing one another. Kale and laboratory mice, both research organisms, both enfolded in the cancer mess, cost life. For da Costa, Servan-Schreiber, and *Anti-cancer Survival Kit* funders, our diets support or imperil the lives of illnesses as they support our bodies: food is exposure, and feeds or starves cancerous tumors that will kill the bodies they live in. As da Costa reminds her friends and family, pizza is not the best choice for her because, according to Servan-Schreiber, its ingredients would (like his pre-recurrence bagels) strengthen the life of the illness by reducing the body’s capacity to kill cancer babies before they become as happy as those in LuYang’s video.

In the cancer mess, the thinking gut ponders remedy’s harm. Servan-Schreiber’s “new way of life”—a life that is simultaneously cancerous and against cancer at once—must be negotiated in the complicated way we negotiate the *pharmakon* and the pink ribbon, the healing and the harm. The harms perpetuated by kale and pink ribbons are perhaps less intuitive to tune into, but an elegiac politics demands that we hold space for those harms, be they bloated indigestions, cellular matter out of place, or playful pink infantilizations. Servan-Schreiber slowly attunes himself to “terrain” even as it threatens his laboriously acquired medical worldview; da Costa commits to messy collaborations with laboratory mice and her therapy dog Lucinha alike. Allowing for harms in these interactions, or seeing previously invisible harms, destabilizes the systems of value and authority that give an illusion of omniscience, what Haraway names the “God trick.”<sup>59</sup>

59. Haraway, “Situated Knowledges,” 582.

Derrida's *pharmakon* is writing, drug, recipe, a "philter which acts as both remedy and poison, . . . beneficent or maleficent," that which we "eventually come to recognize as antisubstance itself," a dangerous supplement.<sup>60</sup> As da Costa serves up a plate of research organism greens, the *Anti-cancer Survival Kit* remembers the shadow antisubstance of those greens by insisting on the work of preparation. The kit becomes a set of activities that are materially bound to the surfaces of daily life: touching cutting boards, apron strings, and seedlings. In this way, the scattered presence of the kit across households and states of health enacts a multibiomic surface encounter that produces a sense of collective terrain. Food preparation with the *Anti-cancer Survival Kit* relates back to *Invisible Earthlings*, sampling common and unexpected surfaces to reveal the lives of the very small. Even though microbial proliferation is actively discouraged in the kitchen, the same principles of careful observation, collection, and consideration for the invisible, innocuous, even helpful tiny lives apply, even and especially in a space designed to inhibit microbial flourishing.

The components of the kit form a material and poetic connection between food and the cancer-seeded body, nourishing the collective terrain of kit users through small touches. These contact zones are a way of accessing the more than human, a process that Ronald Broglio calls "surface encounter." For Broglio, surface encounter pursues the question of "animal phenomenology" by way of new understandings formed through touch and shared space. Broglio argues that philosophy has "flatten[ed] animals' worlds into a thin layer of animal world as a life on the surface of things," and that this flattening into surface has "legitimated cruel acts" but might also be "turned against its negative uses" such that "the surface can be a site of productive engagement with animals."<sup>61</sup> In addition to working through commitments to deconstruction, Broglio's questions about animal phenomenology illuminate how art and philosophy differ, how art might "un-moor" itself from the ways that questions are usually framed.<sup>62</sup> This "thin layer of animal world" might productively travel to a kitchen context. Thinking about food in a surface encounter framework might yield questions about eating meat and consuming animals, but with the *Anti-cancer Survival Kit*, I am more interested in surfaces as contact zones where microbial worlds and human microbiomes touch. These invisible earthlings, present for all our food preparations and ingestions, have the deconstructive force that Derrida ascribes to the *pharmakon* as antisubstance.

### **Conclusion: Surface, Symbiosis, Terrain**

Until now, I have risked collapsing da Costa's *Anti-cancer Survival Kit* with Servan-Schreiber's *Anticancer: A New Way of Life*. The two projects share an antiauthoritarian questioning of mainstream medicine as well as broad research questions and themes.

60. Derrida, "Plato's Pharmacy," 75.

61. Broglio, *Surface Encounters*, xvii.

62. *Ibid.*

Broglio's ruminations on art's work help to articulate why the contemporary art context matters when reading the *Anti-cancer Survival Kit* as a process-driven encounter with the invisible earthlings who move between our food and our microbiomes. For Broglio, art is about approaching and encountering impossibility, and impossibility is a "productive friction" that helps plot new connections between human, animal, art, and philosophy. Servan-Schreiber remains in the realm of the possible; his book might be understood as a reparative reading of the relationship between diet and cancer treatment, albeit a reading that understands the harms of reparative work. Had da Costa lived to oversee the production of the *Anti-cancer Survival Kit*, the project might have kept a foot in the realm of possibility, but her death pushes the work into Broglio's productive friction of impossibility by adding an additional contact zone, contact between the living and the dead. What do I do when I chop kale or slice cheese on my *Anti-cancer Survival Kit* cutting board? I cultivate my own terrain and connect to the terrain of other kit users; my thinking gut has a degree of conscious knowledge about how food and cancer relate; I remember Shani; I feel grateful for the dormancy of the cancer cells seeded throughout my flesh despite the carcinogens permeating the environment where my flesh dwells; and as an effect of all of these understandings and affects, I am undone as an individual human with autonomous bodily boundaries. The process of food preparation, its surface encounters, the way that the kit's logo forces an awareness of invisible earthlings, microbial, cancerous, and everything in between: all of these elements of the project compel a somatic understanding of what Scott Gilbert, Jan Sapp, and Alfred Tauber call "a symbiotic view of life."<sup>63</sup>

Gilbert, Sapp, and Tauber begin by describing some of the ways that technology and human perception arise together, and how developmental biology progresses in tandem with both: "We perceive only that part of nature that our technologies permit and, so too, our theories about nature are highly constrained by what our technologies enable us to observe. . . . We construct those technologies that we think are important for examining a particular perspective of nature."<sup>64</sup> New technologies such as the microscope and polymerase chain reaction facilitate and produce what we see and understand of microbial complexities that allow for "a symbiotic view of life." Although animated by different conceptual goals and less sophisticated technologies than a PCR machine, the *Anti-cancer Survival Kit* contributes to understanding a symbiotic view of life, the life of illness, and the ways in which the harm and remedy turn on the same axis. Having eased their readers into the essay with these technology examples, Gilbert, Sapp, and Tauber systematically outline how "intermingled symbiont relationships" lay bare the colonial patriarchal underpinnings of the stories developmental biology tells about individuality and invite symbiotic thinking across holobiont guts.<sup>65</sup> The most

63. Wilson, *Gut Feminism*, 71; Gilbert, Sapp, and Tauber, "Symbiotic View of Life."

64. Gilbert, Sapp, and Tauber, "Symbiotic View of Life," 326.

65. Wilson, *Gut Feminism*, 71; Gilbert, Sapp, and Tauber, "Symbiotic View of Life," 336.

familiar multibiomic contact zone is the human microbiome, kin to Servan-Schreiber's "terrain." If we think about the microbiome as drawing from Broglio's "surface encounter" model, terrain extends to include consideration of how tumorous mice and women touch through the surfaces of contemporary art and cancer research.

A range of thinkers and writers have adopted landscape metaphors for the human microbiome, from science bloggers to biologists to philosophers.<sup>66</sup> Elsewhere I have attended to the ways in which the human microbiome has been figured ecologically.<sup>67</sup> In this article I have dwelled on how Servan-Schreiber's conversion to a terrain model contributes to this index of the ways in which symbiotic systems have been articulated as landscapes in an effort to complicate the language and ideas we use to describe what has been too facily described as human. The contact zones and surface encounters of da Costa's *Cost of Life* projects build complementary productive tensions between undoing biological individuality and employing metaphors of landscape and environment to describe symbiont relationships.

Servan-Schreiber had to acknowledge the life of his illness before he could understand his body as terrain. Da Costa's turn to food works through similar understandings about her art practice. With her final projects, da Costa acknowledges her cancer not only as subject of and content for an art practice that had rigorously resisted personal confessional modes but also as a lively entity with the political potential to form symbiotic connections across species and life/death boundaries. Of cancer's political potential, Jain reminds us that "as long as cancer remains an individual rather than a communal disease, as long as it is buffered by cultural fear of suffering and death, stigma can be the only response."<sup>68</sup> Da Costa's death should not be construed as a failure to work with her cancer productively—and neither should Servan-Schreiber's (Servan-Schreiber died in 2011 of a recurrence of the brain cancer he describes in his books). In life and death, da Costa and Servan-Schreiber articulate a politics of cancer that makes cancer a communal disease and shifts the conversation away from isolating stigma and toward the kinds of multispecies connections activated by anticancer diets.

By emphasizing interdependency, assistance, and cancer's cultural force, Da Costa's microbiopolitical work with the very small—cancer, mouse, and microbe alike—critiques and resists what Paxson describes as "regimes of social management." Gilbert, Sapp, and Tauber write that "symbiosis is becoming a core principle of contemporary biology, and it is replacing an essential conception of 'individuality' with . . . interactive relationships among species [that] blur the boundaries of the organism and obscure the notion of essential identity."<sup>69</sup> Considering essentialist identity politics as regimes of

66. For example, see Costello et al., "Application of Ecological Theory"; McNally and Brown, "Microbiome"; Walter and Ley, "Human Gut Microbiome."

67. Kelley, "Cooking and Eating across Species."

68. Jain, *Malignant*, 85.

69. Gilbert, Sapp, and Tauber, "Symbiotic View of Life," 326.

social management, this language recalls transdisciplinary anti-essentialist vocabularies familiar from feminist theories of gender performativity and intersectional critical race theory. How are struggles for visibility brought into awareness? When thinking with anti-essentialist biologies, questions of visibility again arise. Wilson has shown how brain-centered maps of the body draw boundaries around organisms, while a “thinking gut” model opens up the symbiotic multispecies potentials of what Elizabeth Povinelli calls “skin sacks”—language that highlights the arbitrariness of skin as a signal of individuality.<sup>70</sup> Policing boundaries around organisms prevents us from perceiving and accessing Gilbert, Sapp, and Tauber’s “interactive relationships.” Da Costa’s cancer lives on in the kitchens of everyone using the kit and in everyone contemplating the lives of laboratory animals while da Costa does “yoga light” alongside stretched and pinned mouse limbs. Works like the *Anti-cancer Survival Kit* and *Dying for the Other* that insist on process and preparation complicate boundaries by encouraging collective, multi-biomic thinking guts and promoting an elegiac politics that engages the life of illness.

LINDSAY KELLEY is a lecturer in Art and Design at University of New South Wales, Australia. Her first book is *Bioart Kitchen: Art, Feminism and Technoscience* (2016). Kelley is a co-investigator with the Kule Institute for Advanced Study-funded Research-Creation and the Social Justice CoLABoratory: Arts and the Anthropocene (University of Alberta, Canada).

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#### References

- Arts Catalyst. “A Memorial for the Still Living: Beatriz da Costa.” Accessed August 7, 2017. [www.artscatalyst.org/memorial-still-living](http://www.artscatalyst.org/memorial-still-living)
- “Big Food.” *PLOS Medicine*. Accessed July 30, 2016. [collections.plos.org/big-food](http://collections.plos.org/big-food).
- Blaser, Martin. “Understanding Microbe-Induced Cancers.” *Cancer Prevention Research* 1, no. 1 (2008): 15–20. [cancerpreventionresearch.aacrjournals.org/content/1/1/15.full](http://cancerpreventionresearch.aacrjournals.org/content/1/1/15.full).
- Broglio, Ronald. *Surface Encounters: Thinking with Animals and Art*. Minneapolis: Minnesota University Press, 2011.
- Costello, Elizabeth K., Keaton Stagaman, Les Dethlefsen, Brendan Bohannon, and David A. Relman. “The Application of Ecological Theory toward an Understanding of the Human Microbiome.” *Science* 336, no. 6086 (2012): 1255–62.
- da Costa, Beatriz. “Directly from Me.” *Beatriz Health and Life Update: Periodic Posts for Beatriz’s Friends and Family* (blog). 2012. [www.nideffer.net/beatriz\\_health\\_and\\_life\\_update/?p=372](http://www.nideffer.net/beatriz_health_and_life_update/?p=372).

70. Povinelli, “Transgender Creeks,” 184.

- . "Dying for the Other." Accessed July 30, 2016. [web.archive.org/web/20130530165933/http://beatrizdacosta.net/Dying\\_for\\_the\\_Other](http://web.archive.org/web/20130530165933/http://beatrizdacosta.net/Dying_for_the_Other).
- . "Dying for the Other." MFA Photo/Video. Accessed July 30, 2016, [vimeo.com/33170755](https://vimeo.com/33170755).
- . *Invisible Earthlings*. 2008–9. [www.nideffer.net/shaniweb/invisible.php](http://www.nideffer.net/shaniweb/invisible.php).
- . "No Sweet Talk This Time." *Beatriz Health and Life Update: Periodic Posts for Beatriz's Friends and Family* (blog). February 25, 2012. [www.nideffer.net/beatriz\\_health\\_and\\_life\\_update/?p=153](http://www.nideffer.net/beatriz_health_and_life_update/?p=153).
- . "Reaching the Limit: When Art Becomes Science." In *Tactical Biopolitics: Art, Activism, and Technoscience*, edited by Beatriz da Costa and Kavita Philip, 365–82. Cambridge, MA: MIT Press, 2008.
- Derrida, Jacques. "Plato's Pharmacy." In *Dissemination*. Translated by Barbara Johnson. New York: Continuum, 1981.
- FemTechNet. "Feminism, Technology, and Transformation." Accessed July 30, 2016. [ats-streaming.cites.illinois.edu/digitalmedia/download/femtechnet/TransformationsTranscript.txt](https://ats-streaming.cites.illinois.edu/digitalmedia/download/femtechnet/TransformationsTranscript.txt).
- Gilbert, Scott, Jan Sapp, and Alfred Tauber. "A Symbiotic View of Life: We Have Never Been Individuals." *Quarterly Review of Biology* 87, no. 4 (2012): 325–41.
- Haraway, Donna. 2013. "Remembering Beatriz da Costa." University of California Santa Cruz History of Consciousness. [histcon.ucsc.edu/news-events/profiles/beatriz-da-costa.html](http://histcon.ucsc.edu/news-events/profiles/beatriz-da-costa.html).
- . "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14, no. 3 (1988): 575–99.
- . *When Species Meet*. Minneapolis: Minnesota University Press, 2007.
- Hawkins, Seth. "Staggering Works: Beatriz da Costa." *Artillery Magazine*, September 3, 2013. [artillerymag.com/staggering-works/](http://artillerymag.com/staggering-works/).
- Jain, S. Lochlann. *Malignant: How Cancer Becomes Us*. Berkeley: University of California Press, 2013.
- Kelley, Lindsay. *Bioart Kitchen: Feminism, Art, and Technoscience*. London: I. B. Tauris, 2016.
- . "Cooking and Eating across Species with Natalie Jeremijenko's Cross(x)Species Adventure Club." In *The Taste of Art: Cooking, Food, and Counterculture in Contemporary Practices*, edited by Silvia Botinelli and Margherita d'Ayala Valva, 279–92. Fayetteville: University of Arkansas Press, 2017.
- Landecker, Hannah. "Food as Exposure: Nutritional Epigenetics and the New Metabolism." *BioSocieties* 6, no. 2 (2011): 167–94.
- Lawrence Wilson Art Gallery. "DeMonstrable." Accessed July 30, 2016. [www.lwgallery.uwa.edu.au/exhibitions/past/2015/demonstrable](http://www.lwgallery.uwa.edu.au/exhibitions/past/2015/demonstrable).
- LuYang. "Cancer Baby by LuYang." Accessed April 6, 2017. [vimeo.com/90603945](https://vimeo.com/90603945).
- McNally, Luke, and Sam Brown. "Microbiome: Ecology of Stable Gut Communities." *Nature Microbiology* 1 (2016). [www.nature.com/articles/nmicrobiol201516](http://www.nature.com/articles/nmicrobiol201516)
- Moore, Crys. "Art in the After." *Art:21 Magazine*, June 12, 2013. [magazine.art21.org/2013/06/12/art-in-the-after/](http://magazine.art21.org/2013/06/12/art-in-the-after/).
- . "Beatriz da Costa Rockethub Video." Accessed July 30, 2016. [vimeo.com/55487001](https://vimeo.com/55487001).
- Moss, Steven, and Martin Blaser. "Mechanisms of Disease: Inflammation and the Origins of Cancer." *Nature Clinical Practice Oncology* 2, no. 2 (2005): 90–97.
- Nideffer, Robert. "In Loving Memory of Shani (6/11/74–12/27/12)." *Beatriz Health and Life Update: Periodic Posts for Beatriz's Friends and Family* (blog). 2012. [www.nideffer.net/beatriz\\_health\\_and\\_life\\_update/?p=398](http://www.nideffer.net/beatriz_health_and_life_update/?p=398).
- Paxson, Heather. "Microbiopolitics." In *The Multispecies Salon*, edited by Eben Kirksey, 115–21. Durham, NC: Duke University Press, 2014.
- . "Post-Pasteurian Cultures: The Microbiopolitics of Raw-Milk Cheese in the United States." *Cultural Anthropology* 23, no. 1 (2008): 15–47.
- Povinelli, Elizabeth. "Transgender Creeks and the Three Figures of Power in Late Liberalism." *differences: A Journal of Feminist Cultural Studies* 26, no. 1 (2015): 168–87.
- Sears, Cynthia, and Wendy Garrett. "Microbes, Microbiota, and Colon Cancer." *Cell Host and Microbe* 15, no. 3 (2014): 317–28.
- Sedgwick, Eve Kosofsky. *Touching Feeling: Affect, Pedagogy, Performativity*. Durham, NC: Duke University Press, 2002.

- Servan-Schreiber, David. *Anticancer: A New Way of Life*. New York: Viking, 2008.
- Sokoloff, Boris. "The Problem of Cellular Anarchy." *Cancer Research* 11, no. 3 (1927): 246–81.
- Stacey, Jackie, and Janet Wolff, eds. *Writing Otherwise: Experiments in Cultural Criticism*. Manchester: Manchester University Press, 2013.
- Stengers, Isabelle. *Cosmopolitics I*. Minneapolis: Minnesota University Press, 2011.
- Stephens, Elizabeth, Oron Catts, and Jennifer Johung. "DeMonstrable: The Ear-Mouse, Twenty Years Later: A Critical Reappraisal." Panel discussion at the Society for Science, Literature, and Art Neolife conference, Perth, Australia, October 1–3, 2015.
- Timeto, Federica. *Diffractive Technospaces: A Feminist Approach to the Mediations of Space and Representation*. Farnham: Ashgate, 2015.
- Walter, Jens, and Ruth Ley. "The Human Gut Microbiome: Ecology and Recent Evolutionary Changes." *Annual Review of Microbiology* 65 (2011): 411–29.
- Wilson, Elizabeth. *Gut Feminism*. Durham, NC: Duke University Press, 2015.