Olfactory Worldmaking

Hsuan L. Hsu

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Introduction

THE ARTIST AND WRITER Warren Cariou (Métis) concludes his essay "Landsensing" with an olfactory epiphany. Cariou has spent years working intimately with bitumen, "a material that is undeniably messy, toxic, and extremely smelly" that is "extracted in . . . tar sands strip mines, and processed into the gasoline, diesel, and petrochemicals that underwrite the conditions of modern life."[1] He characterizes the "petrographs" (Figure 1) he creates as an effort to repurpose bitumen from the petroleum industry "toward the creative purpose of revealing what is being done to the land of the Athabasca region and the people who are intimately connected with it" (308). Wearing a respirator, Cariou develops bitumen (a photosensitive material) into haunting photographs that document the infrastructures and ecological devastation wrought by petroleum extraction in the Athabasca tar sands region. While this process might seem to double down on realism by incorporating a toxic material from the photographed landscape into the photographic process, the resulting images make the infrastructures and land-

1. Warren Cariou, "Landsensing: Body, Territory, Relation," in *Land/Relations: Possibilities of Justice in Canadian Literatures,* eds. Larissa Lai and Smaro Kamboureli (Wilfred Laurier University Press, 2023), 309, 308. Subsequent references cited parenthetically.

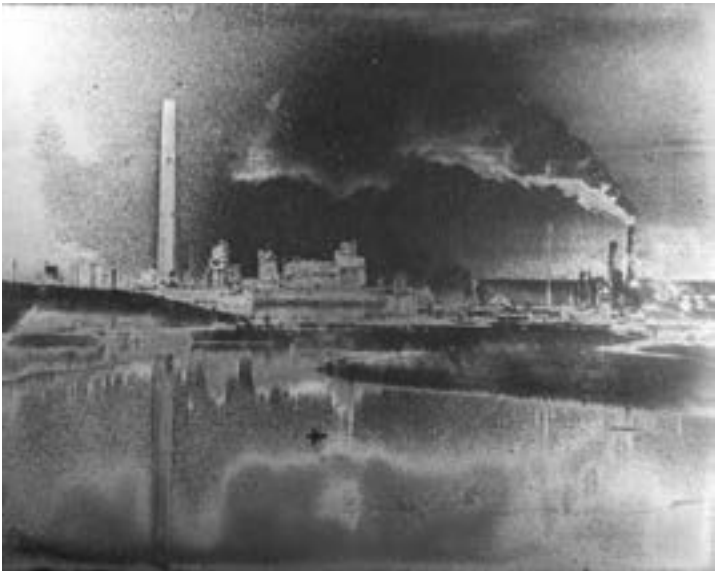

Figure 1. Warren Cariou, *Syncrude Plant and Tailings Pond Reflection*. 2015. 8″ × 10″ petrograph on aluminum. Courtesy of the artist.

scapes of extraction appear shadowy and flitting—"evanescent" rather than inevitable.[2]

While Cariou often describes the smell of bitumen in negative terms ("awful," "stench," "almost unbearably acrid and offensive"; "His nose was raw with the fumes"[3]), he also associates it with a very different memory of material encounter. When gathering bitumen

2. Warren Cariou, "Petrography," http://www.warrencariou.com/petrography, accessed Sept 2, 2024. For extensive discussions of Cariou's petrography, see Siobhan Angus and Warren Cariou, "Tar Remedies: Methods of Return and Re-vision on Colonized/Contaminated Land," *Environmental Humanities* 16, no. 2 (2024), 478–94, and Siobhan Angus, *Camera Geologica: An Elemental History of Photography* (Duke Unvirsity Press, 2024), 30–66.

3. Angus, *Camera Geologica*; Cariou, "An Athabasca Story," *Lake: Journal of Arts and Environment* 7 (Spring 2012), 74.

for use in his petrography process, Cariou traversed strip-mined hillsides "suffused in horrible toxic odours and drifting smoke," then suddenly came upon a lush and pleasant-smelling place:

> Here, the mining companies had not come to disturb the surface, and the bitumen was there as it has always been, as part of the natural ecosystem. And the smell there was wonderful. We could sense the bitumen, but it was beautifully mingled with the other scents of fresh rain, new spring growth, and blooming wild roses. And now when I smell the raw, unprocessed bitumen in my petrography studio, I remember the gorgeous place it came from, and I think about the Indigenous people of the Athabasca region who, according to legend, used bitumen for generation after generation to seal their birchbark canoes and other vessels. And in that smell, I think I can sense a possibility of a different relationship with this material, which has been treated with such disrespect for more than a century. I even imagine that the bitumen might be used for healing purposes, if we can learn the sensory skills and the teachings that the material has to give us. (323)

The "wonderful" smell of naturally occurring bitumen embedded in a complex and balanced web of relations reminds us that toxic landscapes are not inevitable and that toxicity (as well as malodor) inheres more in modes of relation than in materials themselves. Cariou wears a respirator when working with bitumen because "I have to treat it with respect" (322). By contrast, toxicity is the necessary, disavowed outcome of capitalist processes of extraction, production, and consumption that forego respectful relations, unevenly exposing humans and more-than-human communities to a growing range of bioaccumulating risks. The shift in Cariou's perspective resonates with anthropologist Zoe Todd's (Métis) concept of "fossil kin,"[4] which reframes petrochemicals as kin who have been "weaponized" by petro-capitalism and whom we should relate to differently. Cariou concludes his essay on a speculative note: the

4. "What other worlds can we dream of for the remnants of the long-gone . . . flora and fauna that existed millions of years ago?" Zoe Todd, "Fish, Kin, and Hope: Tending to Water Violations in *amiskwaciwâskahikan* and Treaty Six Territory," *Afterall* 43 (Spring/Summer 2017), 107.

surprisingly pleasant smell of bitumen in its "natural ecosystem" attunes him to other, respectful ways of relating to bitumen and to the land with which it is entangled.

Having written a book about smell as a medium for engaging with environmental violence, I was struck by the way Cariou's olfactory encounter challenges our expectations about the smell of bitumen, prying it loose from petro-capitalist processes that have positioned it as a material closely associated with ecological devastation and environmental racism. In addition to framing scent as a medium of atmospheric injustice, writers and artists like Cariou engage with the reparative work that smell can do in contexts of environmental harm. In their works, smells incite collective memory, impel smellers towards suppressed intimacies, and disclose alternate worlds. Encounters with such works have prompted me to revisit olfactory art and writing through the conceptual framework of *worldmaking*.

Olfactory Worldmaking argues that scent is a powerful and often overlooked medium of worldmaking. Whereas research on smell tends to focus on its empirical and psychological impacts and on how it is invoked to shore up social boundaries, I approach smell as an experience that shapes our sense of present and possible worlds. In framing smell as a medium, I emphasize not only its capacity to communicate meanings, memories, and affects, but its resonance with theories of "elemental media" that, following John Durham Peters, conceptualize media in expansive terms as "vessels and environments, containers of possibility" or as "our infrastructures of being, the habitats and materials through which we act and are."[5] How does smell attune us to possibilities for shaping more livable worlds, and how can it make sensible alternative modes of being and relating? Building on critical accounts of environmental violence, I focus on smell's capacities for communicating relationality on material, embodied, visceral, and volatile registers that have

5. John Durham Peters, *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (University of Chicago Press, 2015), 2, 15.

been suppressed by liberalism's ocularcentric "distribution of the sensible."[6] To better understand how smell nuances and extends relations across time and space, I consider olfactory projects that, like Cariou's petrography, offer speculative responses to the atmospheric violence that enables—and is produced by—racial and colonial capitalism. These projects—which range from historical novels, memoirs, and speculative fiction to conceptual artworks and experimental perfumes—orient us toward new understandings of smell as an open-ended medium of communication and relation.

My focus on olfactory worldmaking builds on conversations across multiple disciplines that have interrogated *worldmaking* as a concept attuned to aesthetic engagements with speculation and ontology. Scholars of art and literature (especially science fiction and fantasy) have found inspiration in philosopher Nelson Goodman's *Ways of Worldmaking* (1978), which argued that symbolic activity plays a powerful role in making and remaking the world we inhabit.[7] Goodman's work expands the stakes of art and literature by showing how our ways of noticing project and realize different worlds: for example, it informs Mark Jerng's understanding of racial worldmaking as the "narrative and interpretive strategies that shape how readers notice race so as to build, anticipate, and organize the world."[8]

Looking beyond Goodman's anthropocentric focus on symbolic activity, environmental humanities scholars have taken up phe-

6. Jacques Rancière, *The Politics of Aesthetics: The Distribution of the Sensible,* trans. Gabriel Rockhill (Bloomsbury, 2013), 12.

7. Nelson Goodman, *Ways of Worldmaking* (Hackett, 1978). For generative discussions of worldmaking that build on Goodman, see Mark Jerng, *Racial Worldmaking: The Power of Popular Fiction* (Fordham University Press, 2017); André Carrington, "The Cultural Politics of Worldmaking Practice: Kehinde Wiley's Cosmopolitanism," *African and Black Diaspora: An International Journal* 8, no. 2 (2015): 245–57; Vid Simoniti, *Artists Remake the World: A Contemporary Art Manifesto* (Yale University Press, 2023).

8. Jerng, *Racial Worldmaking,* 1–2.

nomenologies and multispecies networks that decenter the human. Building on Jakob von Uexküll's inquiry into the perceptual worlds of nonhuman species,[9] posthuman framings of worldmaking range from Anna Tsing's ethnography of matsutake-pine-human assemblages ("Making worlds is not limited to humans"[10]) to Donna Haraway's assertion that "Ontologically heterogeneous partners become who and what they are in relational material-semiotic worlding."[11] It is important to note, however, that this turn to New Materialist and more-than-human ontologies in the environmental humanities is not unprecedented: as Zoe Todd notes, theorists of the ontological turn often appropriate or obscure longstanding Indigenous "cosmologies that enmesh people into complex relationships between themselves and *all* relations."[12]

In the fields of Indigenous studies and critical ethnic studies, worldmaking orients expansive frameworks for understanding aesthetic and political practices that lay the groundwork for alternative, decolonial futures. Discussions of Indigenous cosmologies—and on Indigenous resistance to settler colonialism's world-ending worldmaking—offers vital insights into decolonial ecologies: for example, Candace Fujikane details how "Kānaka Maoli are restoring the worlds where their attunement to climatic change and their capacity for kilo adaptation, regeneration, and transformation will enable them to survive what capital cannot."[13] Black feminist scholars

9. Jakob von Uexküll, "A Stroll through the Worlds of Animals and Men: A Picture Book of Invisible Worlds," trans. Claire Schiller, reprinted in *Semiotica* 89, no. 4 (1992): 319–91.

10. Anna Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton University Press, 2021), 22.

11. Donna Haraway, *Staying with the Trouble: Making Kin in the Cthulucene* (Duke University Press, 2016), 12–13.

12. Zoe Todd, "An Indigenous Feminist's Take on the Ontological Turn: 'Ontology' Is Just Another World for Colonialism," *Journal of Historical Sociology* 29, no. 1 (March 2016): 6, emphasis in original.

13. Candace Fujikane, *Mapping Abundance for a Planetary Future: Kanaka Maoli and Critical Settler Cartographies in Hawai'i* (Duke University Press, 2021), 3. See also Dolleen Tisawii'ashii Manning, "Mnidoo-Worlding:

have developed groundbreaking theories of worldmaking beyond the terms of the human, oriented by Sylvia Wynter's critique of a post-Columbian worldview that centered a racialized, colonial, and gendered conception of "Man."[14] Research on "imaginative practices of worlding," "working-class Black migrant worldmaking" and archives of "black alternative world-making" have situated black cultural production as an endeavor to imagine and realize worlds that refuse the terms of liberal, antiblack humanism.[15] As Kevin Quashie observes, black pessimist thinkers have theorized "black ontology both as an impossibility in the logic of the antiblack world and as a possibility that requires perceiving differently what the world is or looks like or can be—worldmaking."[16] Interdisciplinary research on worldmaking also builds on the foundational work of the queer Latinx studies scholar José Esteban Muñoz, whose argument "that minoritarian performance labors to make worlds—worlds of transformative politics and possibilities" reframed the stakes of embodied queer-of-color performativity in both theatrical contexts and everyday rituals.[17] Worldmaking is a creative and necessary response to the necropolitical "death-worlds" propagated by colonial and racial capitalism: as Leanne Betasamosake Simpson (Michi Saagiig Nishnaabeg) writes in a recent exchange with black

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Merleau-Ponty and Anishinaabe Philosophical Translations," (PhD diss., University of Western Ontario, 2017).

14. Sylvia Wynter, "1492: A New World View," in *Race, Discourse, and the Origin of the Americas: A New World View,* eds. Vera Lawrence Hyatt and Rex Nettleford (Smithsonian Institute Press, 1995).

15. Zakiyyah Iman Jackson, *Becoming Human: Matter and Meaning in an Antiblack World* (NYU Press, 2020), 1; J. T. Roane, *Dark Agoras: Insurgent Black Social Life and the Politics of Place* (NYU Press, 2023), 3; Jayna Brown, *Black Utopias: Speculative Life and the Music of Other Worlds* (Duke University Press, 2021), 7–8; see also Tavia Nyong'o, *Afro-Fabulations: The Queer Drama of Black Life* (NYU Press, 2018); Kevin Quashie, *Black Aliveness, or A Poetics of Being* (Duke University Press, 2021).

16. Quashie, *Black Aliveness,* 8.

17. José Esteban Muñoz, *Disidentifications: Queers of Color and the Performance of Politics* (University of Minnesota Press, 1999), 195.

feminist scholar Robyn Maynard, "Imperialism and ongoing colonialism have been ending worlds for as long as they have been in existence, and Indigenous and black peoples have been building worlds and then rebuilding worlds for as long as we have been in existence."[18]

Sensory experience plays a vital and often underexamined role in theories of worldmaking. In his phenomenological account of "the animatedness of the perceptual world," David Abram argues that reattuning to "the incarnate, sensorial dimension of experience" can recuperate connections to "the living landscape" that have been eroded by modernization.[19] But sensory worldmaking is not circumscribed by nostalgia for premodern sensory capacities—it also encompasses the affective and relational possibilities afforded by extraordinary, transgressive, or more-than-human sensory experiences. Anna Tsing opens *The Mushroom at the End of the World* with an evocative description of the "autumn aroma" that draws foragers, eaters, and scholars alike into the matsutake mushroom's worldmaking assemblages.[20] In a recent interdisciplinary collaboration, Melody Jue et al. develop a speculative and synaesthetic approach to translating the underwater "chemosensory worlds of kelp forest organisms."[21] Muñoz extended his work on queer-of-color worldmaking by introducing the concept of a shared "sense of brown"—an affective route encompassing "multiple modes of being, feeling, and knowing in the world."[22] Black feminist scholar Tiffany Lethabo King notes that black and Indigenous worldmaking cannot

18. Achille Mbembe, "Necropolitics," trans. Libby Meintjes, *Public Culture* 15, no. 1 (2003): 11–40; Robin Maynard and Leanne Betasamosake Simpson, *Rehearsals for Living* (Haymarket, 2022), 44.

19. David Abram, *The Smell of the Sensuous: Perception and Language in a More-Than-Human World*, 41, 48.

20. Tsing, *The Mushroom at the End of the World,* 1–9, 45–52.

21. Melody Jue, Anya Yermakova, Jacob Cram, and Eli Stine, "Invisible Kelp Forest: From Smell to Sound," *Plant Perspectives* 1, no. 1 (2024): 193.

22. José Esteban Muñoz, *The Sense of Brown* (Duke University Press, 2020).

happen without new sensory comportments: "new world-making practices require pores, skin, bone, touch, erotics, and new haptic modes that change our relations to notions of the human as an ordered sovereign, bounded, raced, and settled individual."[23] King's emphasis on sensorial worldmaking practices refuses ocularcentric conceptions of future-thinking as "visionary" or even "speculative," instead moving us toward futures premised on embodied sensation. Even Goodman's foundational discussion of worldmaking methods also acknowledges the importance of sensory recalibration, suggesting that cultural products that attune us to "shared or sharable forms, colors, feelings . . . induce reorganization of our accustomed world in accordance with these features."[24] Worldmaking occurs not only through the discursive or representational production of new ideologies but also through interventions in liberal humanism's sensorial order—an order that is produced by both the normative education of the senses and the distribution of sensory stimuli across differentiated spaces. Just as recalibrating our attention can enable different, more intricate relations to the world, changing what is available to be sensed in everyday environments (for example, through olfactory prohibitions or critical perfuming practices) can recalibrate our sensory habits.

Though it often goes unnoticed, olfactory worldmaking happens all the time, wherever there are humans or nonhumans with working olfactory receptors—our only sensory neurons that are directly exposed to the environment. Smelling is a visceral, transcorporeal process that takes in emanations from the environment and from nearby bodies: as philosopher Gaston Bachelard puts it, "Odors are the first evidence of our fusion with the world."[25] The

23. Tiffany Lethabo King, *The Black Shoals: Offshore Formations of Black and Native Studies* (Duke University Press, 2019).

24. Goodman, *Ways of Worldmaking,* 105.

25. Gaston Bachelard, *The Poetics of Space,* trans. M. Jolas (1958; repr. Penguin, 2014), 136. Elena Mancioppi offers an extended discussion of olfactory phenomenology in "Osmospheric Dwelling: Smell, Food, Gender, and Atmospheres," *ESPES: The Slovak Journal of Aesthetics* 11, no. 2 (December

recent spread of temporary or prolonged anosmia as a symptom of Covid-19 (whose uneven impacts were compounded by preexisting vulnerabilities resulting from race, class, and colonialism) has presented extensive evidence of the importance of smell as a capacity for making connections with the world. Along with data that correlate loss of smell with heightened rates of depression, apathy, loss of appetite, and suicidal ideation, firsthand accounts emphasize a sense of environmental disconnectedness: "The world is very blank. Or if not blank, shades of decay. I feel alien from myself. It's also a kind of loneliness in the world."[26] Although experiences of acquired anosmia highlight extreme cases of sensory disconnectedness, they also suggest that those of us who frequent largely deodorized spaces may have already become acclimated to an attenuated range of olfactory relations.

The sensory historian Constance Classen's discussion of the olfactory "cosmology" of the indigenous Ongee people who reside in Little Andaman Island demonstrates that the marginalization of smell in Western, colonial modernity is a culturally specific condition that upholds a culturally specific way of understanding the world. "For the Ongee," writes Classen, "smell is the fundamental cosmic principle. Odour is the source of personal identity and the reason for living in society, a system of medicine and a system of communication; it determines temporal and spatial movements, it produces life and death."[27] By contrast, the worldmaking methods that Goodman singles out—composition and decomposition, weight-

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2022): 38–53. On olfaction and trans-corporeality, see Hsuan Hsu, *The Smell of Risk: Environmental Disparities and Olfactory Aesthetics* (NYU Press, 2020).

26. Commentator on Covid anosmia quoted in Duika Watson et al., "Altered Smell and Taste: Anosmia, Parosmia and the Impact of Long Covid-19," *PLoS One* 16, no. 9 (Sept 2021), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8462678/. While acquired anosmia is often narrated as a loss of connectedness, it is important to note that anosmia can also open onto other sensorial modes of making connections with the world.

27. Constance Classen, *Worlds of Sense: Exploring the Senses in History and Across Cultures* (Routledge, 1993).

ing, ordering, deletion and supplementation, and deformation—bring into focus how liberal humanism's sensorial interventions (for example, devaluing the sense of smell, deleting stigmatized odors, imposing hedonic metrics onto olfactory experience, or extracting of scents for use in perfumes) contribute to worldmaking by both controlling odors and devaluing our sense of smell. Even within this attenuated sensorium, however, smell remains a powerful interface for what Erica Fretwell calls "sensory world making."[28] Fretwell develops this concept in a provocative reflection prompted by Bruno Latour's essay about the olfactory sensitization kits used to train perfumers: "to explore the proximities of lived and literary genres is to posit literature as a technology or 'kit' that has the potential to reproduce—not copy but produce *more*—feeling and, in the key of radical empiricism, to create more connections to the world by registering more differences in it."[29]

Attuning to olfactory connections to the world is challenging, because they run askew of the prevailing norms of deodorization and olfactory differentiation that underpin liberal humanist worldmaking. Deodorization—which encompasses not only histories of sanitation infrastructure and hygiene but also the marginalization of olfaction in the Enlightenment's ocularcentric sensorium[30]—

28. Erica Fretwell, *Sensory Experiments: Psychophysics, Race, and the Aesthetics of Feeling* (Duke University Press, 2020), 4.

29. Fretwell, *Sensory Experiments,* 29. See Bruno Latour, "How to Talk About the Body? The Normative Dimension of Science Studies" *Body and Society* 10, no 2–3 (2004): 205–29.

30. For histories of deodorization through sanitation, infrastructure, and public health campaigns, see Alain Corbin, *The Foul and the Fragrant: Odor and the French Social Imagination* (Harvard University Press, 1988), and Melanie Kiechle, *The Smell Detectives: An Olfactory History of Nineteenth-Century Urban America* (University of Washington Press, 2017). As was recently made evident by the vitriolic social media responses to a Cambridge University dissertation on the ethics and politics of olfaction, deodorization also covers its tracks by discrediting smell as a mode of knowing and a subject of critical inquiry. Garrett Shanley, "Her Thesis on the 'Politics of Smell' Stirred the Online Masses," *Chronicle of Higher*

responded to the immersive, unruly, and embodied qualities of olfactory experience by producing spaces and subjective states aligned with liberal fictions of autonomy, rational separation, and disembodied thought. Deodorization campaigns were not just a matter of public health—they helped establish liberalism's common-sense conceptions of the human (its disembodied mind, its sensory hierarchy, the empty Cartesian spatial expanses it inhabits and governs) and its others (who supposedly could not attain "mastery over their own sensory, irrational nature").[31] As Kandice Chuh explains in *The Difference Aesthetics Makes,* "This partitioning of the sensible, which is the common sense, determines the boundaries of the community (who belongs) and who may speak in and for it (who is authorized)."[32] Moreover, modern processes of deodorization have always been unevenly distributed, and, as a result, black, Indigenous, and people of color are disproportionately exposed to noxious atmospheres and the "toxic worlding" they entail.[33]

As an alternative to this liberal humanist worldmaking and the violence it perpetuates, Chuh calls for "aesthetic inquiry unconfident in the primacy of the visual" and open to the unruly "potentiality embedded in an encounter with an object that appeals in extraordinary ways to the senses."[34] What critical methods would do justice to such extraordinary sensory encounters—to "the possibilities of worldmaking . . . feeling the touch between things, the new, odd,

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Education (December 5, 2024) https://www.chronicle.com/article/her-thesis-on-the-politics-of-smell-stirred-the-online-masses-heres-what-she-thinks-about-it, accessed Apr 3, 2025.

31. Sylvia Wynter, "Unsettling the Coloniality of Being/Power/Truth/Freedom: Towards the Human, After Man, Its Overrepresentation—an Argument," *CR: The New Centennial Review* 3, no. 3 (2003): 290.

32. Kandice Chuh, *The Difference Aesthetics Makes: On the Humanities "After Man"* (Duke University Press, 2019), 23.

33. Mel Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Duke University Press, 2012), 196.

34. Chuh, *The Difference Aesthetics Makes,* 24.

unfamiliar movements that become possible in the encounter"?[35] In her study of shadows and noise as "sensual forms of knowing," Amber Jamilla Musser argues for a method that centers situated, embodied knowledge and critical attunement—"knowledge about the feelings, sensations, geographies, and temporalities that comprise the densely layered now of empire as well as knowledge about the worlds that exceed it."[36]

If olfactory worldmaking is oriented by critique of the injustices and produced gaps in memory, knowledge, and sensation that perpetuate racial and colonial capitalism, it also calls for reparative modes of study—such as description, immersive participation, speculation, and attunement[37]—that are informed by the understandings of racial and colonial violence produced by scholarly methods of "critique" and "damage-centered analysis."[38] For Tsing, multispecies relations demand that we retune sensory habits that have been entrained by capitalist and anthropocentric values: "World-making projects emerge from practical activities of making lives; in the process these projects alter our planet. To see them, in the shadow of the Anthropocene's 'anthropo-,' we must reorient our attention."[39] At times, the most challenging task is to notice and describe sensory

35. Mel Chen, *Intoxicated: Race, Disability, and Chemical Intimacy Across Empire* (Duke University Press, 2023), 16.

36. Amber Jamila Musser, *Between Shadows and Noise: Sensation, Situatedness, and the Undisciplines* (Duke University Press, 2024), 15, 22.

37. On the production of absences of knowledge, see Robert Proctor and Londa Schiebinger, eds., *Agnotology: The Making and Unmaking of Ignorance* (Stanford University Press, 2008), and Manu Vimalassery, Juliana Hu Pegues, and Alyosha Goldstein, "Introduction: On Colonial Unknowing," *Theory & Event* 19, no. 4 (2016); on "attunement as a critical corporeal method," see Musser, *Between Shadows and Noise,* 26.

38. Eve Kokovsky Sedgwick, "Paranoid and Reparative Reading, or, You're So Paranoid, You Probably Think This Essay Is About You," in *Touching Feeling: Affect, Pedagogy, Performativity* (Duke University Press, 2002), 123–51; Eve Tuck, "Suspending Damage: A Letter to Communities," *Harvard Educational Review* 79, no. 3 (Fall 2009): 409–27.

39. Tsing, *The Mushroom at the End of the World,* 21–22.

relations and theoretical implications that are already present in a text: as Robyn Maynard puts it, "What kind of world-making, what kind of livingness do we see emerging, as always-already in the works, from the past-present Black and Indigenous traditions of radicalism, resistance, and co-resistance?"[40] Attuning to illiberal modes of sensorial worldmaking is difficult, because it requires both "unlearning"[41] established modes of attention and acknowledging when particular sensory associations are unavailable or only discursively available to the situated, embodied critic. Description—of both embodied sensory experiences and the worldmaking they take part in—is also a demanding practice when it refuses the presumed separation of subject and object: "If we understand description as enhanced attention, we can direct that attention inward and outward, to how we describe as well as what we describe."[42]

Critical attention to sensorial worldmaking offers an alternative to the extractive impetus that underlies conventional frameworks for olfactory research—for example, the tendency to evaluate smell according to hedonic metrics, behavioral analyses focusing on how scents affect productivity or consumer behavior, and the fragrance industry's reliance on literal processes of odor extraction.[43] Hedonic and behavioral approaches substitute quantitative and frequently decontextualized data for modes of olfactory knowledge that are oriented by collective memory and relational ecologies. Extractive logics can even shape practices of olfactory writing, as when per-

40. Maynard and Simpson, *Rehearsals for Living,* 27.

41. Chen, *Intoxicated,* 11.

42. Sharon Marcus, Heather Love, and Stephen Best, "Building a Better Description," *Representations* 135 (Summer 2016): 12.

43. See Charles Spence, "Leading the Consumer by the Nose: On the Commercialization of Olfactory Design for the Food and Beverage Sector," *Flavour* 4 (2015): https://link.springer.com/article/10.1186/s13411-015-0041-1, accessed October 6, 2025. For a critical discussion of aesthetic capitalism's extractive approaches to scent, see Jennifer Kitson and Kevin McHugh, "Olfactory Attunements and Technologies: Exposing the Affective Economy of Scent," *GeoHumanities* 5, no. 2 (2019): 533–53.

fume writers single out efficacious scent components so that they can be described, synthesized, preserved, exchanged, remixed, and so forth. Following the Stó:lō sound studies scholar Dylan Robinson's critique of settler colonialism's imposition of "hungry listening" (a method of listening that "prioritizes the capture and certainty of information over the affective feel, timbre, touch, and texture of sound"), we might consider how racial and colonial capitalism supplements its demand for deodorization with acquisitive modes of smelling focused on capturing information about olfactory materials and responses.[44] Smelling alone is not a sufficient response to imperatives of deodorization and olfactory capture: it is necessary to focus not just on the unruly characteristics of smell but specifically on how scents disclose (or enact) human and more-than-human relations, and how they communicate otherwise worlds. Instead of merely teaching us to be more discerning about scent, olfactory aesthetics can train us to discern—and, when appropriate, participate in—projects of sensorial worldmaking.

Like the writers and artists considered in this book, I am especially interested in how smell can refuse liberal norms of communicability and transparency. Those who work closely with scent are well aware of the irreducible aspects of olfactory perception, which varies not just with different odorants but with the sensory and cultural predispositions (as well as the individual nasal microbiomes) of different smellers. *Contra* efforts to reduce or systematize it, smell frequently manifests as an encounter with opacity. As Édouard Glissant argues, a "right to opacity"—which the demand for difference to render itself legible—can provide the basis for modes of relation premised not on liberal humanist conceptions of

44. Dylan Robinson, *Hungry Listening: Resonant Theory for Indigenous Sound Studies* (University of Minnesota Press, 2020), 38. Musser similarly notes that the colonial and racial common sense "would conjoin approaches to works of art with projects of knowledge extraction, thereby flattening a wide swath of sensory orientations, intimacies, and histories" (*Between Shadows and Noise,* 2).

universality but on divergence: "Opacities can coexist and converge, weaving fabrics. . . . There would be something great and noble about initiating such a movement, referring not to Humanity but to the exultant divergence of humanities."[45] The qualities of olfaction that incline toward opacity—such as its subjectivity, elusiveness, resistance to language, and variance according to individual and collective memories—make scent a capacious medium for exploring modes of relation and community that refuse to relinquish irreducible differences through assimilation.[46]

Smell shapes collective worlds both locally and across a range of geographic and temporal scales. These relations range from interpersonal and multispecies intimacies to the diasporic enactment of an "alternative sensorium" that anthropologist Lisa Law describes among Filipina migrant workers who gather weekly in Hong Kong's "Little Manila," to the olfactory inclinations that the perfumer Tanaïs treats as intergenerationally inherited *vasanas*.[47] The scent of sandalwood essential oil has vastly different worldmaking implications for different breathers: for a settler yoga practitioner, it might serve as a reminder to keep their mind "in the present"; for the Kanaka Maoli scholar and graphic artist Rae Ke'ala Kuruhara, reflecting on the scent of sandalwood (*'iliahi*) forests decimated by colonial trade and tourism, it evokes a lost and yet potentially resurgent world in which "there must have been a sense of embodiment, like you were wearing the air of the forest with you as it entangled with your own odor."[48] Interventions in smellscapes—

45. Édouard Glissant, "For Opacity," trans. Betsy Wing, in *Poetics of Relation* (University of Michigan Press, 1990), 190.

46. "This same opacity is also the force that drives every community. The thing that would bring us together forever and make us permanently distinctive" (Glissant, "For Opacity," 194).

47. Lisa Law, "Home Cooking: Filipino Women and Geographies of the Senses in Hong Kong," *Cultural Geographies* 8, no. 3 (2001), 280. I discuss Lai's seductive durians in chapter 3 and Tanaïs's *vasanas* in chapter 1.

48. Rae Ke'ala Kuruhara, "He Inoa 'Ala: Scent, Memory, and Identity in Indigenous Comics," *Journal of Asian American Studies* 26, no. 3 (October 2023): 372.

whether through fragrance-free policies (which can contribute to creating spaces of care for activist worldmaking)[49] or the introduction of socially marginalized scents into deodorized spaces—have the potential to more equitably redistribute these olfactory cues for embodied experiences of intimacy, memory, and community that can extend across spatial and generational boundaries.

Understanding smell as a medium for reparative worldmaking expands the stakes of olfactory aesthetics. Scholars often frame the political interventions of olfactory texts and artworks as efforts to expose environmental injustice and to evoke sympathy across social and spatial divides;[50] worldmaking draws attention, instead, to the expansive modes of affect and relation catalyzed by scent. Because smell is irreducibly material and often extends across cultural and species boundaries, olfactory art involves a multitude of relations between the artwork, the breather's personal and cultural olfactory histories, their preexisting microbiome and chemical body burden, substances already present in the atmosphere, and the air emitted by everyone else in the space. Haraway's "sympoeisis"—in which "Natures, cultures, subjects, and objects do not preexist their intertwined worldings"—evokes the collaborative and convivial nature of these relations more effectively than liberal notions of sympathy.[51] Olfactory projects can reproduce existing worlds—namely, modernity's uneven, atmospherically segregated spaces in which commodified fragrances signal prestige; but they can also unravel

49. See Leah Lakshmi Piepzna-Samarasinha, "Fragrance Free Femme of Colour Genius" (2018) https://brownstargirl.org/fragrance-free-femme-of-colour-genius/. While Piepzna-Samarasinha notes that chemical exposure can make people become sensitized to other, organic fragrances, her focus is on the harm and exclusions that chemical and synthetic scents can enact in collective spaces.

50. See, e.g., Hsu, *Smell of Risk*; Clara Muller, "Eco-Olfactory Art: Experiencing the Stories of the Air We Breathe," and Dorothée King, "Is There Empathy Through Breathing?," both in *Olfactory Art and the Political in an Age of Resistance,* eds. Gwenn-aël Lynn and Debra Parr (Routledge, 2021).

51. Haraway, *Staying with the Trouble,* 12–13.

them, drawing attention to other modes of relation, communication, atmospheric composition, and more-than-human intimacy. Olfactory worldmaking bridges the separation of texts from the world: it is not just representational but inherently participatory. It prompts us to work toward transforming both atmospheric injustices and our attenuated olfactory sensitivities, and to immerse ourselves in smell as a medium of more-than-human relation and reciprocity.

To understand how cultural works engage with smell on both representational and nonrepresentational[52] registers, this book studies a range of olfactory forms: memoirs oriented by scent, experiments in decolonial perfuming, multimodal art installations, and speculative fiction. These works center the worldmaking activity of BIPOC (Black, Indigenous, and People of Color), feminist, queer, and migrant breathers—those who often find themselves marginalized and rendered precarious within modernity's differentially deodorized atmospheres.[53] They envision and enact creative and more livable modes of "air conditioning"—philosopher Peter Sloterdijk's term for the conditioning of air that unevenly conditions human and nonhuman lives.[54] These works also upend the liberal sensorium by centering smell as a powerful medium for remaking human and more-than-human relations. In these works, olfactory speculation attunes us to both derecognized pasts and alternate futures—it weaves embodied BIPOC memories into webs of kinship and reciprocity.

The chapters that follow foreground how sensorial worldmaking pushes us to rethink concepts—smellscape, microclimate, and speculative narrative—whose implications stretch across multiple

52. See Nigel Thrift, *Non-Representational Theory: Space, Politics, Affect* (Routledge, 2007); Ben Anderson and Paul Harrison, *Taking-Place: Non-Representational Theories and Geography* (Routledge, 2010).

53. On "differential deodorization," see Hsu, *Smell of Risk*, 14.

54. Peter Sloterdijk, *Foams: Spheres III*, trans. Wieland Hoban (Semiotext(e), 2016), 95.

disciplines, interdisciplines, and practices. Chapter 1, "Fragrant Time: Smellscape as Distributed Memory," reconsiders J. Douglas Porteous's influential concept of smellscape from the perspectives of Indigenous and diasporic breathers. Whereas Porteous relies on the accounts of white European men describing unfamiliar, exotic smellscapes, I center the sensory projects of Indigenous writers and the queer, Bangladeshi-American perfumer Tanaïs. Through close engagement with these works, I rethink smellscape as an atmospheric distribution of memory and affective capacities that has important implications for Indigenous and migrant communities who often have limited or culturally stigmatized access to scents that evoke memories on both personal and collective, transgenerational scales.

Chapter 2, "Conjuring Black Microclimates," builds on Christina Sharpe's discussion of "microclimates" that sustain black life amid modernity's antiblack atmospheres. I focus on how the aromatic media of conjure or "hoodoo"—incense, roots, powders, sachets, candles—supported the lives of black diasporic practitioners by materializing connections across the vast geographies of the Black Atlantic, the circum-Caribbean, and the Great Migration. After discussing historical accounts of conjure's olfactory elements, I turn to two works that take conjure as an occasion for speculative narrative: Toni Morrison's *Song of Solomon* and Renée Stout's *Tales of the Conjure Woman*. Morrison's novel—often read as a reimagining of the legend of the Flying African—presents the scent of sweet ginger as alternate mode of taking to the air, associated with black women's practices of care and healing. Stout's multimodal installation presents roots and perfumes as components within an overarching narrative of black feminist erotic and community empowerment. The microclimates of conjure offer a compelling example of the reparative and future-oriented implications of interventions in the atmospheric distribution of memory and affect.

Chapter 3, "Sensorial Estrangement: Smelling Otherwise Worlds," focuses on "sensorial estrangement" as a capacious aspect of "cognitive estrangement," which has often been overlooked by schol-

ars who overemphasize science fiction's "hard," technoscientific interventions.[55] Attending to speculative narratives that throw our sensory habits and expectations off balance—and that build worlds from otherwise sensory arrangements—draws attention to embodied modes of relation that have often been overlooked by scholars who overemphasize the techno-scientific and cognitive estrangements of "hard" science fiction. To convey the range and aesthetic complexity of smell as a subject of sensorial estrangement, this chapter discusses a series of speculative works that redistribute the sensorium in ways that foreground how olfaction solicits more-than-human intimacies. Octavia Butler's *Xenogenesis* and *Fledgling* and Larissa Lai's *Salt Fish Girl* explore both the affordances and contradictions of smell as a chemical medium that provokes—and at times compels—queer, interspecies modes of eroticism and reproduction. Anicka Yi's Tate Modern exhibition, *In Love with the World* extends Butler's and Lai's concerns into the domain of embodied AI by putting gallery visitors into relation with flying biobots who sense and relate to human and nonhuman bodies—and to a series of carefully crafted scents—in evolving, unpredictable ways.

55. For a critical account of "hard" science fiction as a mode of gendered, ethnocentric genre policing, see Aimee Bahng, *Migrant Futures: Decolonizing Speculation in Financial Times* (Duke University Press, 2017), 13.

1. Fragrant Time: Smellscape as Distributed Memory

IN 1985, the geographer J. Douglas Porteous coined the term *smellscape* to focus attention on how smell "provide[s] considerable enrichment of our sense of space and the character of place."[1] Porteous's capacious framework for understanding smell's spatial and emotive qualities has been influential in shaping social and cultural research on olfaction. A recent review of publications over a ten-year span shows that scholars have found the concept generative in studies of invisible cultural heritage, environmental design, and "experiential" aspects of wellness and tourism.[2] While much of this work acknowledges the subjective elements of olfaction, researchers have had less to say about how smellscape reproduces power and social differentiation.

Instead of framing smellscape in universal terms, I argue for a more critical understanding of smellscape that attends to its uneven modes of inclusion and exclusion. In connection with research in critical race studies, distributed cognition, and cultural geography,

1. J. Douglas Porteous, "Smellscape," *Progress in Physical Geography* 9, no. 3 (September 1985): 360. Subsequent references cited parenthetically.

2. Jieling Xiao et al., "Recent Advances in Smellscape Research for the Built Environment," *Frontiers in Psychology* 12 (July 2021), https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.700514/full.

I suggest that, under our conditions of racial capitalist modernity, smellscape is not designed to be experienced in the same way by everyone; instead, in addition to unevenly distributing atmospheric chemicals and particulate matter, smellscape functions as an atmospheric medium for the uneven distribution of memory. This uneven access to sensory materials tied to embodied memory has far-reaching and largely unacknowledged consequences for Indigenous and diasporic subjects whose lived experience has already been fragmented by dislocation, trauma, and cultural derecognition. Reframing smellscape as *distributed memory* enables a fuller understanding of BIPOC-authored olfactory works as projects that interrogate and reclaim the air as a shared and deeply uneven medium for collective, embodied memory. I will elaborate on this alternate framing of smellscape by discussing how ambient scents enact memory and forgetting in a set of Indigenous narratives that feature scenes of olfactory recognition, and in the writing and perfuming practice of the queer Bangladeshi-American perfumer Tanaïs.

Whose Smellscapes?

Porteous makes a compelling case for olfaction as both a method and object of spatial inquiry. Whereas geographers have been preoccupied with the sense of vision—with making and reading maps intended to render space as transparent, homogeneous, and fixed—olfaction is incompatible with the visual distance and abstraction required by Western cartographic practice. Where "landscape" reduced land, sea, and sky to the placid conventions of the picturesque—a genre that contributed to the naturalization of colonial conquest[3]—"smellscape" appeals to perhaps our most embod-

3. W. J. T. Mitchell, "Imperial Landscape," in *Landscape and Power,* ed. W. J. T. Mitchell, 2nd ed. (University of Chicago Press, 2002); Anuradha Gobin, "Constructing a Picturesque Landscape: Picturing Sugar Plantations in the Eighteenth-Century British West Indies," *Hemisphere: Visual Cultures of the Americas* 4, no. 1 (2011): 42–66.

ied, involuntary, and visceral sensory capacity. Smell refuses the ideals of order, perspectival stability, and proportion associated with landscape—any smellscape, Porteous writes, "will be non-continuous, fragmentary in space, and episodic in time" (91). Far from merely supplementing visual geographies, smellscape draws our attention to a wholly different mode of inhabiting time and space.

Despite his attention to the immersive qualities of smell, however, Porteous's reflections on smellscape rely heavily on the descriptions of sensorially distanced outsiders. Because immersion quickly brings on the "habituation effect" (where salient smells fade into the imperceptible background), Porteous claims that "almost all literary descriptions of smells (with the important exception of childhood memories, which are distanced in time rather than space) are the work of non-residents" (90); he thus claims that "Almost invariably . . . odorous descriptions are the work of outsiders" (94). This privileging of olfactory outsiders helps contextualize Porteous's considerable influence on studies of tourist and heritage smellscapes, which center the perspectives of travelers and present-day audiences interested in recuperating past smellscapes (often for the purpose of preserving or fabricating a sense of local or national identity that can marginalize or appropriate the experience of Indigenous and migrant communities).

Because he attributes these imbalances in olfactory discourse to "habituation" rather than power, Porteous is uncritical about the elisions that shape his archive—the fact that the "outsiders" whose published olfactory observations he cites are predominantly white men embedded in imperialist networks. Despite his interest in the spatial aspects of scent, Porteous's sources dwell on bodily odors, or how "personal smells vary according to race, ethnicity, culture, age, sex, and class." Although he notes that "it may no longer be appropriate to mention the highly-differentiated smells of the basic human racial groups," he goes on to do just that, citing Graham Greene's account of the smell of Liberian trekkers in the bush. Claiming that "Native African writers . . . rarely supply significant

smell descriptions," Porteous centers white men as discriminating sensors while trafficking in essentializing accounts of "Third World" and "ethnic" smells: "No account of India, from Kipling to the recent popular novels of M. M. Kaye and the accounts of Geoffrey Moorhouse and the Naipauls, fails to invoke the peculiar smell of that subcontinent *[sic]* a mixture of dung, sweat, heat, dust, rotting vegetation, and spices" (94).

As Porteous articulates it, smellscape becomes an uncritical map of power relations and a tool of racial and geopolitical differentiation. "The Third World," he writes, "has its distinctive smell regions. One may distinguish Cuernavaca from Cairo, from Calcutta, from Canton by the nose alone" (95). By contrast, Porteous presents a much more granular, nostalgic discussion of historical Western smellscapes. For example, he details smells that would have been "experienced on a cyclical basis" in European towns: from wash day, baking day, and haymaking time to various holidays, "English villages sixty years ago abounded in seasonal odors" (99). Despite his assumption that colonial smellscapes are best described by metropolitan "outsiders," Porteous assumes that European sources (with their "insider" noses) are nevertheless competent to provide nuanced descriptions of their own smellscapes. This juxtaposition of Europe's past smells with contemporary "Third World" smellscapes is shaped by a logic of temporal othering[4] that imagines colonial and postcolonial places and scents to be sealed off from developmental time. In casting such locations as repositories of olfactory experiences that have been eroded by the "blandscapes" of Western modernity, Porteous implies that modernization has been a teleological process of deodorization, rather than a messy and environmentally violent process of differential deodorization whereby racial capitalism extracts commodified fragrances from post/colonial plantations while displacing noxious industrial odors and other "externalities" to poorer and less powerful communities worldwide.

4. Johannes Fabian, *Time and the Other: How Anthropology Makes Its Object* (1983; repr. Columbia University Press, 2014).

Despite these problems, Porteous's central point about the world-making implications of smellscape remains more relevant than ever: "to retain a rich, placeful world, individuals must come to appreciate the sensuous complexity of their environments" (104). His insight about the emotive ties between smell and sense of place seems especially vital for those whose sensory and affective experience have been targeted by colonial and racial capitalism—not for the Western European travelers at the center of Porteous's essay, but for racialized, colonized, postcolonial, and migrant breathers immersed in uneven, often violent smellscapes. Rethinking smellscape as distributed memory shifts our attention from the uneven distribution of airborne toxins to another dimension of atmospheric harm, and of potential repair: the olfactory media that evoke embodied memories in evanescent, unpredictable, yet culturally patterned ways.

Distributed Memory

The concept of distributed memory builds on recent research in distributed cognition, actor-network theory, and New Materialism. This work demonstrates that our cognitive, affective, and agential capacities are not constrained to individual propensities—instead, they are often shaped by continuous interactions between and among human and nonhuman actants. In his influential essay, "How a Cockpit Remembers Its Speeds," cognitive scientist Edwin Hutchins explains that, in a commercial airliner cockpit, memory processes occur at the interfaces between people and their equipment:

> Memory is normally thought of as a psychological function internal to the individual. However, memory tasks in the cockpit may be accomplished by f25unctional systems which transcend the boundaries of the individual actor. Memory processes may be distributed among human agents, or between human agents and external representational devices.[5]

5. Edwin Hutchins, "How a Cockpit Remembers Its Speeds," *Cognitive Science* 19, no. 3 (1995): 284.

Memory is not limited to the notion of an individual subject accessing information stored in their brain. Instead, it is a continuous and interactive process oriented by a range of instruments, and by constant communication between people interfacing with different instruments (and with the cockpit's air). As Hutchins's title suggests, the "subject" of memory here is not an individual but the entire system of humans and carefully positioned instruments that make up the cockpit.

In *The Scent of Time,* the philosopher Byung-Chul Han reflects on a very different apparatus technological arrangement for distributed cognition: the incense clock, a device for measuring time widely used in China before the twentieth century. Han contrasts the incense clock—which employs fragrance to orient cognition toward an experience of temporal stillness—with Western modernity's accelerative conception of time as a progression of disconnected moments. Where mechanical clocks enact time as homogeneous and empty, the incense clock materializes time as radiant scent and lingering ash. "Fragrant time does not flow or trickle away. Nothing is emptied. Rather, the scent of the incense fills the room, even turns time into space; it thus gives it a semblance of duration."[6] For Han, this materialization of time as something held in the atmosphere offers a contemplative alternative to capitalist modernity's drive toward acceleration and haste. "A society dominated by scents would probably also not develop any inclinations toward change or acceleration. It would live off its recollections and its memory, off those things that are slow and long-lasting."[7] In Han's account, time is not an abstract concept in the user's mind—instead, it is a lived experience oriented by the scents of slowly burning pine and cedar. The perception of time inheres in the interface between the perceiver and the incense clock. We could say that the breather

6. Byung-Chul Han, *The Scent of Time* (Polity, 2017), 57.
7. Han, *The Scent of Time*, 57, 46.

inhales the scent of duration and metabolizes it into a radically different mode of inhabiting time and memory.

Scents are characterized by duration—they take place in time and often evoke memories of other times. As Han notes, the most celebrated example of the powerful neurological links between scent and memory is Marcel Proust's encounter with a madeleine dipped in tisane in *Swann's Way.* In Proust's account, the visceral senses of smell and taste remain "a long time, like souls, ready to remind us, waiting and hoping for their moment, amid the ruins of all the rest . . . [bearing] in the tiny and almost impalpable drop of their essence, the vast structure of recollection."[8] While critics typically focus on how scent evokes the lost world of childhood in this passage, it is also a scene of private recollection and olfactory consumption with suggestive implications for mental health: not only is it literally about consuming food and drink in the privacy of a bourgeois home, but it also figures scent as a "tiny and almost impalpable drop of . . . essence"—as a drop of distillate or essential oil. This chemosensory experience immediately uplifts the narrator's mood and sense of self: "I had ceased now to feel mediocre, contingent, mortal. Whence could it have come to me, this all-powerful joy?"

Several aspects of olfactory memory get sidelined in this overrepresented Proustian scene. Although the scene has become synonymous with the concept of *mémoire involontaire,* the encounter with the madeleine is pleasurable and voluntary. Individual consumption occludes the political questions provoked by olfactory encounters that involve ambient odors or other involuntary exposures, as well as traumatic sensory triggers. Proust also foregrounds private memory associations, without attending to smell as a medium for collective memory or more expansive historical relations—for example, the madeleine's eighteenth-century origin as one of the many sweets concocted to feature the product of Caribbean sugar plantations.

8. Marcel Proust, *Swann's Way: Remembrance of Things Past*, vol. 1, trans. Charles Kenneth Scott Moncrief (Random House, 1934), 57–58.

Philosopher Larry Shiner suggests that the overrepresentation of the madeleine draws attention away from "those odor memories that *connect* us to others rather than provide private epiphanies waiting to be transformed into art."[9] A relatively familiar food in much of the West, the madeleine also overshadows the many underrepresented and frequently inaccessible scents that, if available, would powerfully evoke embodied memories for displaced Indigenous and migrant breathers.

The opening scene of Jhumpa Lahiri's novel, *The Namesake* (2003), offers an instructive counterpoint to Proust's madeleine. In the kitchen of her apartment in Cambridge, Massachusetts, two weeks before her due date, Ashima Ganguli struggles to recreate *jhal muri*—a popular Kolkata street food—using Rice Krispies and Planters peanuts. "She adds salt, lemon juice, thin slices of green chili pepper, wishing there were mustard oil to pour into the mix . . . a humble approximation of the snack sold for pennies on Calcutta sidewalks and on railway platforms throughout India, spilling from newspaper cones. Even now that there is barely space inside her, it is the one thing she craves. Tasting from a cupped palm, she frowns; as usual, there's something missing."[10] Here, the cultural memory imperfectly evoked by an approximated recipe takes on added significance in the context of reproduction: the missing ingredient—mustard oil—suggests that her child will be cut off from a meaningful sensory experience connected to Ashima's memories of Kolkata.

Mustard oil—an ancient, common, and culturally significant ingredient widely used in Asian (especially South Asian) cuisines—was prohibited for culinary use by the U.S. Food and Drug Administration in 1989 due to high concentrations of erucic acid (which was associated with cardiological health issues in lab rats); its consumption is also highly regulated in the European Union,

9. Larry Shiner, *Art Scents: Exploring the Aesthetics of Smell and the Olfactory Arts* (Oxford University Press, 2020), 133, emphasis in original.

10. Jhumpa Lahiri, *The Namesake* (Mariner, 2004), 1.

Australia, and New Zealand. Critics of these regulations have noted that other products containing erucic acid—such as canola oil and prepared mustard—have not been similarly restricted.[11] For migrants in the United States whose memories of home and childhood are associated with the pungent smell of mustard oil, Ashima Ganguli's sense of "something missing" is a common experience. For them, the scent and flavor of mustard oil could be as evocative as Proust's madeleine—it could help them weave connections between memories, places, and experiences that have been fractured by personal and collective histories of migration (and, in many cases, of war, trauma, and compelled cultural assimilation). While migrants might encounter madeleines and herbal teas in Western food spaces, they are much less likely to encounter mustard oil—at least not legally. Yet, ironically, mustard oil may be freely used in incongruous spaces such as bathrooms or massage studios: in the United States, it is labeled as a body product "for external use only."[12]

Smellscapes are not just spatial—they are suffused with time and with heterogeneous, lived geographies. They enable and occlude memories—both individual and collective—in ways that are idiosyncratic and unpredictable, yet culturally patterned. The differential availability, legality, stigmatization, and valorization of smells in both private and public spaces has profound implications for people's capacity to encounter and experience atmospheric manifestations of memory and affect—and thus for mental and physical health, cultural continuity, and social relations. Whose olfactive memories are carried in public and private atmospheres, and whose are prohibited, eradicated, or stigmatized? How might this framing of smellscapes as distributed memory prompt us to rethink the stakes of olfactory politics and olfactory design? What are its im-

11. Linda Ziedrich, *The Joy of Pickling* (Harvard Common Press, 2009), 154.

12. On the stigmatization of racialized immigrants' everyday food smells, see Lalaie Ameeriar, "The Sanitized Sensorium," *American Anthropologist* 114, no. 3 (2012): 509–20.

plications for writers and scent designers who aim to support the collective memory and cultural resilience of BIPOC? Writings by Indigenous and migrant authors explore these questions by staging olfactory encounters as sites of struggle over embodied modes of memory and relation.

Olfactory Anagnorisis

While Lahiri's account of *jhal muri* with "something missing" illustrates how hegemonic smellscapes unevenly distribute material supports of memory, literature by BIPOC authors also includes powerful scenes of odor-induced remembrance. Like Proust's encounter with the madeleine, these moments of olfactory recognition often occur at narrative turning points. For Indigenous and migrant breathers, however, access to memory is all the more vital because it can enable reconnection with modes of historical and cultural knowledge that have been deliberately eroded by schools, media, and other institutions of liberal common sense.

I would like to introduce the term *olfactory anagnorisis* to highlight the formal and political implications of these scenes of olfactory recollection. Aristotle's *Poetics* defines *anagnorisis* as "a change from ignorance to knowledge, producing love or hate between the persons destined by the poet for good or bad fortune."[13] Usually translated as "recognition," *anagnorisis* derives from the prefix *ana-* (back, again) and *gnōrizein* (to make known). The prefix suggests a return to knowledge that has been lost or forgotten, implying that there has been a process of forgetting or *agnosia* (ignorance). In BIPOC literature—and especially in Indigenous literature—olfactory anagnorisis enables both a recovery from a state of unknowing and critical understanding of the forces that produced unknowing.

13. Aristotle, *The Poetics of Aristotle,* trans. S. H. Butcher, 4th ed. (Macmillan, 1922), 41.

In the formal device of anagnorisis, sensory perception and sensuous knowledge intersect with recent critical conversations about racial and colonial capitalism's reliance on the production of "colonial unknowing"—Manu Vimalassery, Juliana Hu Pegues, and Alyosha Goldstein's term for "an epistemological orientation that works to preempt relational modes of analysis."[14] These scholars draw on Jodi Byrd's (Chickasaw) theorization of "colonial agnosia," a pervasive and normalized colonial condition that "entails trouble assembling elements of an image into an understandable whole, and difficulty in grasping the relationship of objects to one another."[15] Byrd's term, *agnosia,* references a neurological condition involving the inability to recognize objects based on normally functioning sensory perceptions. This suggests that colonial unknowing is generated by sensory disconnection—or, in Rancière's terms, a distribution of the sensible that occludes both colonial relations and alternative modes of sensing.[16] As Christy Spackman argues in her work on water sanitation infrastructures, understanding historical dynamics of "agnotology" (or the study of the production of absences of knowledge) requires careful attention to the labor and infrastructures that generate absences or disavowals of sensory experience.[17]

Lee Maracle's (Stó:lō) novel, *Celia's Song* (2014), presents a striking account of how settler smellscapes produce colonial agnosia. Maracle depicts a group of Stó:lō women struggling to survive the varied effects of settler colonialism, which include epidemics, ecological colonialism, residential schools, land seizures, criminalization, suicides, violence against women, child abuse, hunger,

14. Vimalassery, Hu Pegues, and Goldstein, "Introduction."

15. Vimalassery, Hu Pegues, and Goldstein, "Introduction." The authors cite Jodi Byrd's unpublished work, "Fracturing Futurity, Colonial Agnosia, and the Untimely Indigenous Present," lecture presented at the University of New Mexico, Albuquerque, October 25, 2012.

16. See Rancière, *The Politics of Aesthetics, 12–19.*

17. Christy Spackman, *The Taste of Water: Sensory Perception and the Making of an Industrialized Beverage* (University of California Press, 2023), 14.

depression, drug abuse, and the prohibition of ceremony. Maracle characterizes settler genocide in atmospheric terms by drawing attention to how the settler state's regulation of wood gathering has transformed the familiar smells of Stó:lō homes: "The old houses were cedar planked. . . . The walls soaked up smells, held them, and layered one smell over the next until the smells of the day before and the days after created a unique blend of the family's favourite foods."[18] For Maracle, a smellscape suffused with cedar functions as atmospherically diffused capacity to access memories, stories, and teachings essential to what Kyle Powys Whyte (Citizen Potawatomi) calls "collective continuance." As Whyte writes, "collective continuance is a community's capacity to be adaptive in ways sufficient for the livelihoods of its members to flourish into the future."[19] If "the very smell of [homes] marked the caring of the women," then the loss of cedar—along with the olfactory effects of central heating, "cleaning agents and air fresheners"—has eroded the generations of care work accumulated in the walls of Stó:lō homes. This olfactory transformation—which should be situated within historical processes of olfactory disorientation wrought by ecological colonialism, forced relocation, residential schools, and carceral spaces—threatens the role of memory and story as repositories of future-oriented knowledge: "Sometimes memory gets stuck in some sort of soup inside my mind and only the right scent will dislodge it. Stirring the soup can help you recall the story, the teaching that is going to solve this trouble, this terrible moment, and now those smells are gone. The smells are gone from the roadside, the hillside, and the houses, and I just can't remember anymore" (60–61). If smell as a public, atmospheric support of memory situates people in collective time, Maracle draws attention to the deracinating cultural and psychological effects of settler colonialism's reshaping of

18. Lee Maracle, *Celia's Song* (Cormorant, 2014), 58. Subsequent references cited parenthetically.

19. Kyle Powys Whyte, "Indigenous Women, Climate Change Impacts, and Collective Action," *Hypatia* 29, no. 3 (Summer 2014): 602.

lived atmospheres: "*How in the world can you change the smells of someone else's world?*" *Celia's Song* goes on to recount how characters cleanse and remake this settler smellscape—suffused with the "scent of death," a "*licence to kill that hangs in the air like a stench*"—through cedar smudging and smokehouse ceremonies attuned to the material and spiritual interconnections between people and the atmospheres they inhabit (61, 23, 159, emphases in original).

In Indigenous literature, olfactory anagnorisis activates memory, affect, and knowledge across multiple scales. Extending far beyond the relations between human individuals emphasized in Aristotle's account of anagnorisis, olfactory encounters like Warren Cariou's epiphany (discussed in the opening paragraphs of this book) evoke memories of place, ceremony, cosmology, and ecological reciprocity that orient characters and readers toward alternate futures. In E. Pauline Johnson's story "As It Was in the Beginning" (1913), for example, a young Cree woman named Esther is taken to a mission school, where she is indoctrinated in the colonial unknowing of settler culture and falls in love with Laurence, the priest's white nephew. In a pivotal scene, a familiar scent reanimates Esther's childhood memories:

> And then one night the feeling overcame me. I was in the Hudson's Bay store when an Indian came in from the north with a large pack of buckskin. As they unrolled it a dash of its insinuating odor filled the store. I went over and leaned above the skins a second, then buried my face in them, swallowing, drinking the fragrance of them, that went to my head like wine. Oh, the wild wonder of that wood-smoked tan, the subtlety of it, the untamed smell of it! I drank it into my lungs, my innermost being was saturated with it, till my mind reeled and my heart seemed twisted with a physical agony. My childhood recollections rushed upon me, devoured me. I left the store in a strange, calm frenzy, and going rapidly to the mission house I confronted my Father Paul and demanded to be allowed to go "home," if only for a day.[20]

20. E. Pauline Johnson, "As It Was in the Beginning," in *The Moccasin Maker* (William Briggs, 1913), 167–68.

The priest, Father Paul, refuses Esther's request to visit her home because he wishes to keep her away from "pagan influences." But the scent of smoke-tanned skins remains with her, and not long after, after Esther hears Father Paul advising his nephew not to marry her because she is "the daughter of a pagan Indian," she kills the nephew with a poisoned arrow and returns home.[21] The overwhelming scent of the buckskins functions not just as a reminder of Esther's identity and her suppressed relations—it also subliminally guides her to the buckskin dress she had worn to the mission school as a child, in which her mother had hidden the poisoned arrow in case of future need.

Scent-based memories also play a vital role for Indigenous people displaced by processes of colonial dispossession. Makerita Urale's (Samoa) *Frangipani Perfume* (1997), "the first Pacific play to be written by a woman writer for an all-female cast"[22] stages the lives of three young Samoan women working the night shift as cleaners in an office high rise in Auckland. Preceded by the sound of the sisters' "heavy lethargic breathing" as they scrub the floor, the play's first line—"God, the toilets stink today!"—underscores the malodorous and chemically toxic conditions of their work producing deodorized atmospheres conducive to settler whiteness ("cleaning until everything's white").[23] As they work, the sisters contrast the stench of bleach and urine with their memories of Samoa and the "beautiful smelling oils made by our women back in the islands" (6). The youngest sister, Pomu, studies Western science and anthropology and believes that the making of frangipani perfume in the family village in Samoa "must be quite a complex scientific process [involving] all sorts of chemicals" (6). The play concludes with a "cleansing

21. Johnson, "As It Was in the Beginning," 172.

22. David O'Donnell, "Introduction," in *Frangipani Perfume by Makerita Urale/Mapaki by Dianna Fuemana* (The Play Press, 2004), i.

23. Makerita Urale, *Frangipani Perfume,* in *Frangipani Perfume by Makerita Urale/Mapaki by Dianna Fuemana,* 4, 7. Subsequent references cited parenthetically.

breath," as the elder sisters tell the youngest how, in Samoa, their mother made frangipani perfume each year when the frangipani tree rained down its blossoms:

> **NAIKI:** Our mother made the oil of Frangipani Perfume from the white flesh of a coconut, dried brown into copra scattered on large brown mats laid out in the hot sun. The white scented flowers are soaked in the oil, and when the petals are brown and wilted, they are removed . . . leaving the fragrance of Frangipani Perfume. (35)

By narrating the traditional practice of perfume making, Urale unravels colonial framings of frangipani—a material that Western perfumers (who often market synthetic scents as "frangipani") have long associated with colonial fantasies of exoticism and "discovery."[24] The scene shifts to a dreamlike reverie as the transmission of this "perfumed secret" instills in Pomu (who left when she was too young to remember in detail) a fully fleshed-out memory of childhood in Samoa:

> I see it now . . . another world, colours everywhere. . . . A cool tropical breeze gently sweeps over me and—plucks a million petals free, a shower of white flowers falling and falling like pure rain, a million fragrant kisses on my skin, and I breathe and breathe their secret scent as they brush my cheeks, soft as velvet, soft as a dream. We lie beneath the shelter of the Frangipani Tree and we dream and dream. (35)

Filled with sensuous detail, this scene dramatizes how scent, in connection with other senses, can elicit a flood of multisensory memories—not just a remembered fact or event but "another world." Even as a sensory memory—a "secret scent" present only in the sisters' minds, not in their noxious workspace—the scent of frangipani perfume strengthens connections among the sisters, as well as their sense of connection with their human and more-than-human kin in

24. See Andrew Kettler, "Making the Synthetic Epic: Septimus Piesse, the Manufacturing of Mercutio Frangipani, and Olfactory Renaissance in Victorian England," *Senses and Society* 10, no. 1 (2015): 5–25.

Samoa. Urale's stage directions emphasize the healing capacities of these scent-based memories: "*It is this realm of fantasy, memories and dreams which makes the sisters' struggle with the stark reality of their lives, bearable*" (34, emphasis in original).

On Turtle Island, the smell of sweetgrass is evocative of both cultural continuance and colonialism's ecological devastation, as well as projects of ecological and cultural resurgence. For the Potawatomi writer and plant scientist Robin Wall Kimmerer, the scent of sweetgrass, with its "fragrance of honeyed vanilla over the scent of river water and black earth," calls forth memories whose very forgetting has been forgotten: "Breathe it in and you start to remember things you didn't know you'd forgotten."[25] These memories include cosmological understandings of the plant as "the sweet-smelling hair of Mother Earth,"[26] as well as the reciprocal and mutually beneficial relationships between Indigenous basket-weavers and sweetgrass that evolved over centuries before being interrupted by settler landscapes and the imposition of colonial unknowing.[27] Kimmerer details her involvement in a sweetgrass restoration project intended to help reverse ecological, social, and sensory patterns of cultural genocide. Perhaps influenced by Kimmerer's work, Cherie Dimaline's (Métis) speculative novel *The Marrow Thieves* (2017) presents the smell of sweetgrass as an epiphanic sensation ("something I thought I'd only ever smelled with the memory of smell") that awakens hope for the resurgence of Indigenous culture, knowledge, and ecology amid the bleak atmospheres of colonialism and climate apocalypse.[28]

25. Robin Wall Kimmerer, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants* (Milkweed Editions, 2013), ix.

26. Kimmerer, *Braiding Sweetgrass,* ix.

27. For detailed discussions of Kimmerer's work, see Hsu, *Smell of Risk*,, chapter 5, and Warren Cariou, "Sweetgrass Stories: Listening for Animate Land," *Journal of Postcolonial Literary Inquiry* 5, no. 3 (September 2018): 338–52.

28. Cherie Dimaline, *The Marrow Thieves* (DCB, 2017), 168.

In these Indigenous-authored texts, olfactory anagnorisis counteracts colonial agnosia on multiple levels: it acknowledges the significance of olfactory knowledge and relations that have been marginalized in Western, settler aesthetics; it draws attention to the processes that have eroded Indigenous people's access to sensory memories; and it reanimates both individual and collective sensory memories. As a recurrence of ancestral relations that opens onto alternate futures, it resonates with Whyte's discussion of the Anishinaabe conception of "spiraling time," which enables Indigenous people to understand themselves "as living alongside future and past relatives simultaneously as we walk through life."[29] While these concerns also shape the work of diasporic authors who explore how scent can shape diasporic affect and identity across time and space, it is important to consider that diasporic scents may themselves be uninvited presences in Indigenous smellscapes. The diasporic scents discussed in this book—intergenerational memory traces in Tanaïs's memoir, the fragrance of sweet ginger in *Song of Solomon,* the scents of salt fish and durian in *Salt Fish Girl*—contribute to healing and cultural continuity, but they also introduce migrant scents into colonized Indigenous smellscapes. Although these works all acknowledge the complex, uneven relations between diaspora and Indigenous conquest, they do not fully resolve the ethical questions raised by the relations between introduced "settler atmospherics" and migrant scents.[30]

Perfume and Karmic Memory

Through their olfactory writing and perfuming, Tanaïs endeavors to make space for memories and affective capacities that have been

29. Kyle Powys Whyte, "Indigenous Science (Fiction) for the Anthropocene: Ancestral Dystopias and Fantasies of Climate Change Crisis," *Environment and Planning E: Nature and Space* 1, no. 1–2 (2018): 229.

30. Kristen Simmons (Southern Paiute), "Settler Atmospherics," *Fieldsights* (November 20, 2017), https://culanth.org/fieldsights/settler-atmospherics, accessed December 18, 2024.

marginalized by racist, colonial, and patriarchal smellscapes. At the heart of their practice is a conception of scent as a material support (and at times, a traumatic trigger) for memory and affect. Their interest in scent is shaped by an understanding of memory as environmentally distributed: "Memory is fragmentary, fractured in its nature, triggered by everyday sense experiences in the middle of regular life." The title of their Kirkus Prize–winning memoir, *In Sensorium: Notes for My People* (2022)—a play on the common memorializing phrase *in memoriam*—displaces the tendency to privilege textual, inscriptive framings of memory by shifting our attention to embodied memories that are inextricable from sensory inclinations and experiences. The term "notes" blends two different media for holding memories that come together throughout Tanaïs's work, framing the book not only as a collection of written records but as a set of perfuming components or scent notes. The book's subtitle—"Notes for My People"—announces another critical shift: the book's focus is not the supposedly universal, overrepresented sensorium of white, colonial patriarchy but "my people"—a diverse and open-ended collective whose experiences resonate with the author's own lived experiences of historical, social, and sensory violence and exclusion.

In Sensorium reflects on the development of Tanaïs's sense of identity as a queer, diasporic, Muslim, Bangladeshi-American femme, as well as how that identity informs their critical approach to perfuming as a practice of beauty, embodied spirituality, relation, and memory work. The book is also oriented by Tanaïs's exploration of their relationships with family, friends, and lovers, as well as the perfumes they have composed to evoke specific memories and connections. Along the way, Tanaïs interweaves discussions of Atlantic slavery, Partition, the Bangladesh Liberation War, Hindu nationalism, and US race relations that contextualize their own struggles with multiple and intersecting modes of internalized violence—as well as their use of perfuming to support survivors of displacement, domestic and sexual violence, and mass incarceration.

Tanaïs's book intervenes in a popular perfume writing genre that literary critic Hans Rindisbacher has termed the *perfumoirlogue*. Rindisbacher describes this as an autobiographical narrative in which the narrator "sets out on a journey to have a personal fragrance made whose ingredients have to do with her own life and are tied to specific geographies. It involves perfumery as an object of personal reflection and a quest that takes the form of a travelogue."[31] This genre—which often frames perfume as a technology for reaccessing exotic smellscapes that authors have visited—reproduces bourgeois conceptions of perfume steeped in exoticism, imperialist nostalgia, and white privilege. Tanaïs blends travel, memory, and scent on very different terms. Contrasting bourgeois travelogues with their own plans (interrupted by Covid) for a trip following the Ganges, Padma, and Megha rivers, they write: "The Great Trip is a well-worn . . . literary canonical tradition that is masculine, Western, wealthy, tilted toward conquest. But I wanted to document this as a Muslim femme—how many of us had written about passages on these waters?"[32] Unlike conventional perfumoirlogues, Tanaïs draws on their experiences and embodied memories as a socially marginalized perfumer to develop a critical, historically informed approach to travel and perfuming. For them, perfume is a technology of defense and survival—an atmospheric medium that supports healing from the intergenerational traumas of colonialism, Partition, casteism, and hetero-patriarchal violence.

Memory—both individual and collective—is pivotal to Tanaïs's reparative perfuming practice. They observe that everyday olfactory encounters catalyze connections across time, even across generations. For diasporic subjects, sensory experiences that awaken memory can be inaccessible, involuntary, or traumatic; but catalyzing sensory memories can also reanimate—and perhaps repair—

31. Hans Rindisbacher, "What's This Smell? Shifting Worlds of Olfactory Perception," *KulturPoetik* 15, no. 1 (2015): 89.

32. Tanaïs, *In Sensorium: Notes for My People* (Harper, 2022), 299. Subsequent references cited parenthetically.

fractured connections to past experience. Tanaïs approaches perfuming as a practice of empowerment that claims some measure of atmospheric agency. They write: "By collecting fragrant materials, what Saidiya Hartman calls *degraded material of the archive,* and transforming them into new compositions, I have found a way to wrest back our memories, bodies, stories, and smells from the hard damage of colonization" (10). Referencing Hartman's groundbreaking work on "critical fabulation" as a response to the violent erasures of the archive,[33] Tanaïs frames perfuming as a tool for decolonizing memory—with memory understood not as a purely cognitive process but as a capacity that takes material form in everyday smellscapes. Tanaïs shifts the scene of memory work from official state archives to the air itself as a material archive where everyday, transient, and episodic encounters with memory are—or might yet be—accessible to all.

In addition to black feminist writers like Hartman and Toni Morrison, Tanaïs draws on the Vedantic, Hindu, and Buddhist concept of *Vāsanā* to articulate how scents can either enable or withhold capacities for embodied memory. In these philosophical traditions, *vasana*—a term derived from the Sanskrit *vas,* "to perfume,"[34] and that also can refer to the perfuming technique of *effleurage*—is an intergenerational tendency or inclination, a residue of past desires. Wendy Doniger, a lifelong scholar of Hinduism and one of Tanaïs's sources on *vasanas,* glosses the term as follows: "We remember something that we cannot remember, from a lost past, through the power of the invisible tracks or traces left behind on

33. Saidiya Hartman, "Venus in Two Acts," *Small Axe* 12, no. 2 (June 2008): 11.

34. Martha McClintock et al., "Pheromones and Vasanas: The Functions of Social Chemosignals," in *Evolutionary Psychology and Motivation,* 75–112 (University of Nebraska Press, 2001), 99. McClintock et al. adapt the term *vasanas* to refer to chemosignals that are not consciously recognized as odors: "those unconscious chemosignals whose functional effects are related to or predicted by their odour qualities when they are experienced consciously" (99).

our souls by those events; these traces the Hindus call *vasanas,* 'perfumes,' scents that are the impressions of anything remaining unconsciously in the mind—the present consciousness of past perceptions."[35] Adapting this concept as a central element of their perfuming practice, Tanaïs writes, "*Vasana* is a karmic memory, traces of a former life carried into the next; an imprint of a person or a place you once knew. These are the perfumes we know from other lifetimes, in the Hindu tradition of a cosmic déjà vu, a scent that we've encountered before" (21). Materially dispersed across everyday landscapes, olfactory memories are not just personal for Tanaïs—they have a powerful intergenerational basis.

Tanaïs significantly departs from spiritual traditions that stigmatize *vasana* as both a sign and incitement of desire. In the words of the Hindu spiritual leader Swami Chinmayananda, for example, *vasanas* are figured as "iron chains shackling the feet, for him who wishes to be liberated from the prison house of this world."[36] Such calls to "eradicate" *vasanas* align not only with bourgeois, racist, and patriarchal imperatives to eradicate unwanted odors but, more broadly, with discourses of responsibilization that displace social forces—such as the historically sedimented outcomes of empire, patriarchy, casteism, colonization, slavery, and incarceration (note the chains and prison house)—onto individual behaviors. Refusing to participate in the heteropatriarchal and colonial suppression of bodily truths, Tanaïs instead welcomes *vasanas* as lively, molecular traces of fragmented memories, kinships, and desires. In addition to orienting their practice as a perfumer, these karmic memory-traces provide an organizing through line for Tanaïs's book: "Laced throughout this text are *vasanas* that live in my body, my own, those of my family, those of my people. . . . When we know a person's body, as we inhale them, our mind forms a memory, a *vasana* of their scent into our own body. Their molecules imprinted into our

35. Wendy Doniger, *On Hinduism* (Oxford University Press, 2014), 108.
36. Swami Chinmayanda, *Vedanta: The Science of Life*, compiled by K. V. K. Thampuran (Central Chinmaya Mission Trust, 1980), 2:484.

minds" (21–22). In this reformulation, *vasanas* are not just psychological imprints of individual desires but incitements to expand the temporal and social scope of relationality. They do not simply reference the past, but also—through what Will Tullett terms smell's "polysynchronous temporalities"—extend past lifetimes into the breather's present and possible future relationships.[37]

The *vasanas* explored in *In Sensorium* are not for universal consumption. The book's subtitle indicates that these memory-steeped scents are intended for "my people"—those who share some aspects of Tanaïs's experience as a queer Muslim femme, a postcolonial diasporic survivor of sexual violence and intergenerational traumas stemming from British colonialism and the genocidal violence of the 1971 Bangladesh Liberation War. When a critic dismisses one of their perfumes, Mala, by complaining that "*This smells more like a place, than a perfume,*" Tanaïs explains that this was precisely the point: "I made that perfume as a brown-skinned woman in a brown-skinned land, and I wanted to hold the city close to me. For some of us, language, trauma, labor, and land cannot be extricated from why we perfume" (146, emphasis in original). Rather than appealing to the white, bourgeois, and exoticizing preferences that stand in for "universal" tastes, Tanaïs seeks to create scents that surface obstructed and historically derecognized memories—including their own past experiences as a survivor of sexual violence, intergenerational trauma, and ongoing racism and Islamophobia.

Later in the book, Tanaïs provides a more detailed account of this perfume's origins:

> When I returned to New York [from New Delhi], I missed my old haunts and scents of the little Gold Leaf cigarettes I smoked, tea, spices, garlands of rose, carnation, and marigold dangling from the wedding shops, so I re-created that place in this perfume, Mala, as in a garland of flowers, beads, and stories, and in Spanish: a bad woman. I use a single drop of *scent of a loose woman*—choya nakh oil—to fix

37. Will Tullett, *Smell and the Past: Noses, Archives, Narratives* (Bloomsbury, 2023), 88.

> the perfume so that it lingers. Drops of turmeric are in the heart of this perfume, not enough to discern its smell. This is a secret *vasana*, embedded in this incense, the remnants of flowers and memories made to burn. Reborn as fragrant smoke. (271, emphasis in original)

Mala does not commodify or exoticize New Delhi's scents for universal consumption; nor does it present the "scent of a loose woman" (*choya nakh*—a note that Tanaïs elsewhere traces to erotic texts that offer privileged "men's perspectives on their lovers as sex objects, aphrodisiacs, escapes") simply as a means of objectifying women (63). Instead, Mala is designed to communicate a situated experience: the embodied memories of "a brown-skinned woman in a brown-skinned land." Smellscape, here, is tied to Tanaïs's encounters with the *vasanas* of New Delhi. For example, their erotic encounters in the city reframe *choya nakh* as a note of sexual liberation. And, instead of being either stigmatized as a racialized smell or hyped as a wellness trend appropriated by Western influencers, turmeric is included as a "secret *vasana*"—an indistinguishable background that holds space for the perfume's other notes.

In one of the book's "Perfume Interludes"—short interchapters that reflect on the experiences that gave rise to some of their own perfume compositions—Tanaïs describes Lovers Rock, a perfume inspired by the scent of a former lover. In composing this perfume, they sought to evoke both individual and collective scents, both erotic desire and historical patterns of exploitation:

> I wanted to rouse the way I once craved the spiced incense of his body, the frankincense and myrrh oil hustled on sidewalks from Harlem to Bed Stuy. The perfume evokes sex—a heart of Sri Lankan spices, an after-hours dry-down, the sweet smell of sex juice, as you lay next to a person you want to devour, edible gourmand notes of vanilla, an oil that is deep dark, viscous, and black, with none of the associations with white childhood innocence, for the laborers who hand-pollinate the world's vanilla are youths in Madagascar. . . . Lovers Rock is a composition that tells the story of conquest. Its notes are remnants of the past, forgotten jars in the pantry, a reminder of how the spice and slave trade stole the lives and labor of Black and brown people across the Atlantic and Indian Oceans. (163)

Tanaïs frames the perfume's composition as a critique of the cultural whitewashing that associates gourmand fragrances like vanilla with whiteness, innocence, and nostalgia—"concepts of racial innocence in white childhood that are oblivious to or repel and erase the experience of others."[38] As a composition that brings together histories of conquest, enslavement, and desire, Lovers Rock evokes the socially and affectively generative force of erotic connection in the wake of racial capitalist exploitation and erasure. Yet the scents that call forth these collective stories of conquest, resilience, and black and brown love are not freely available in metropolitan smellscapes: "Ironically, all of the notes are restricted or banned by European fragrance regulations; the tobacco, clove, black pepper, tonka bean are all allergens" (163). Like mustard oil, these scents—and the migrant memories they might catalyze—are regulated in the name of "public" health. Should access to distributed memory also be seen as a health determinant, especially for people displaced by colonialism, war, and economic and environmental exploitation?

Tanaïs's understanding of perfume as a technology of healing emerges from their work with survivors of sexual violence, genocide, and incarceration: "I have documented and recorded the stories of survivors around the world, realizing that when people recall their trauma, scent is inextricable from the story" (279). While these scents can trigger trauma, Tanaïs suggests that perfume can also move survivors past traumatic patterns of repetition and disassociation. They conceive of survival in sensory terms: "To survive is to slowly recollect your senses, after having been estranged from your body" (280). Sensory memories shape their method for creating perfumes tailored to the stories of survivors:

> When I have created perfumes with survivors of domestic violence and incarceration, we discuss the *vasanas* of their life before and after their experiences of violence. Each fragrance is a composition of

38. R. Claire Bunschoten, "'Eau de cookie dough': Gourmand Fragrances, Negotiating Nostalgia, and Inedible Food Cultures," *Food and Foodways* 32, no. 4 (September 2024): 333.

> the scent memories amassed throughout their lifetime, notes from their childhood, of solace, of yearning. Only a thin boundary separates the scents of trauma and pleasure. When we work together to build a fragrance, I ask them to think of this act as a metaphor for their freedom. *Once you release a scent trapped inside a vessel onto your skin, into the air*, I tell them, *you are no longer the only one who has to hold this pain*. (244, emphasis in original)

Here, Tanaïs describes a perfuming practice that refuses commodification: instead of appealing to a mass audience or to a supposedly universal sensorium, each of these perfumes addresses an individual survivor. Perfume does not offer an escape here—only a means of releasing traumatic *vasanas* into the air, beyond the confines of the survivor's body and mind.

Tanaïs's podcast, *MALA: Blooms and Bad Women* (2018–20), offers a closer look at their practice of reparative perfuming. In this project, Tanaïs holds space for five formerly incarcerated women to "retell their stories of survival & reimagine them as scents."[39] Drawing on interviews in which they asked about the women's olfactory memories, Tanaïs creates perfumes intended to support the healing of black women whose sensory experience has been neutralized by years spent in alternately deodorized and malodorous carceral spaces. The interviews bear witness to how carceral smellscapes deploy a range of tactics—deodorization, body odors, chemical cleaning agents, and stale air—as tools of abjection and control. One of Tanaïs's interlocutors, Claude, spent twenty-five years in prison for a crime she did not commit. She now wears a range of perfumes—including some inherited from her mother, a Voudun practitioner who created her own perfumes. Drawing on Claude's memories, Tanaïs creates a perfume that is "bright and tropical, inspired by her youth, her Haitian heritage, a perfume as

39. Tanaïs (Tanwi Nandini Islam), *MALA Episode 1: Sharon* (March 8, 2018), https://www.listennotes.com/podcasts/mala-blooms-bad/mala-episode-1-sharon-Jv8mu-oXyQ2/?srsltid=AfmBOoqnHOJidPiIZ05icNxPtmpkYQrPfOi8s32Ayax44HOoIr6bP8Fe.

a getaway . . . The top sparkles with juicy citrus notes of white and pink grapefruit and bergamot—an homage to her father's cologne. For the heart, I go full on tropics: gardenia core and fatty coconut milk. And the base is an amber musk reminiscent of sacred incense, Vodou, and her mother, where Claude's life began."[40] This perfume is not an escape from Claude's reality, but a gathering of her scent-based memories and heritage: her father's cologne, the Haitian tropics, an evocation of her mother's Vodou incense. Because they evoke connections across a range of Claude's place-based memories and transgenerational ties, the perfume may help reanimate memories of childhood interrupted by Claude's twenty-five-year incarceration, which began at the age of nineteen. Tanaïs deploys olfaction's powerful connections across space and time—its evocation of other places, other times, family inheritance, and the cross-generational circum-Atlantic connections held in Voudun—to reintegrate memories and inheritances that have been unsettled by the prison's fracturing of time, place, community, and sensory experience.

Through displacement, settler ecologies, legal regulation, olfactory stigmas, and the norm of deodorization, racial and colonial capitalism produce uneven smellscapes that unmoor Indigenous, migrant, and other vulnerable subjects from embodied memories. In narratives by the Indigenous authors Johnson, Urale, Kimmerer, and Dimaline, the literary trope of olfactory anagnorisis stages not only the recovery of individual memories but a reawakening of sensory knowledges and modes of relation that have been disrupted by colonial agnosia. Tanaïs experiments with olfactory writing and perfuming as practices that can support the varied migrant and

40. Tanaïs (Tanwi Nandini Islam), *MALA Episode 5: Claude* (April 5, 2018), https://www.listennotes.com/podcasts/mala-blooms-bad/mala-episode-5-claude-QD1HVkUSxRo/.

marginalized communities she calls "my people" in remaking deodorized, noxious, and culturally exclusionary smellscapes. These works provide a model for critical studies of smellscape—not as a framework for studying and optimizing the sensory experience of a supposedly "universal" breather, but as a site of struggle over access to sensory atmospheres, cultural continuance, and public memory.

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2. Conjuring Black Microclimates

SLAVE SHIP: A HISTORICAL PAGEANT (1967), Amiri Baraka's "masterpiece of Revolutionary Theatre," opens with a long, wordless scene intended to stage the Middle Passage in multisensory terms:

> Whole theater in darkness. . . . Occasional sound, like ship groaning, squeaking, rocking. Sea smells. In the dark. Keep the people in the dark, and gradually the odors of the sea, and the sounds of the sea, and sounds of the ship, creep up. Burn incense, but make a significant, almost stifling smell come up. Pee. Shit. Death. Life processes going on anyway. Eating. These smells and cries, the slash and tear of the lash, in a total atmosfeeling, gotten some way.[1]

This "Black darkness with smells" (132) immerses the audience in an approximation of the noxious, suffocating "stench of the hold" first detailed by Olaudah Equiano.[2] In Equiano's account, air is not just a medium of bodily subjugation but a tool of abjection: the enslaved are suffocated by their own perspiration and excretions. The hold—where both Atlantic slavery and racial capitalism were created—deployed air as a means of imposing social death and in-

1. Amiri Baraka (LeRoi Jones), *Slave Ship: A Historical Pageant,* in *The Motion of History and Other Plays*, 131–50 (William Morrow & Co, 1978), 132. Subsequent references cited parenthetically.

2. Olaudah Equiano, *The Interesting Narrative of the Life of Olaudah Equiano, or Gustavus Vassa, the African, Written by Himself* (Penguin, 2003), 58.

scribing racial difference in both symbolic and biochemical terms. Juxtaposed with disorienting and violent sounds, Baraka's noxious smells—indicated in the prop list as "Smell effects: incense . . . dirt/filth smells/bodies" (132)—convey a visceral impression of the hold as a space designed to weaponize the senses as tools of dehumanization.

However, the scent of *incense*—perhaps purchased from a Harlem spiritual supply store—persists amid these smells of filth and death. Incense, associated with both urban Hoodoo and black nationalist street vendors,[3] evokes collective memories, religious affiliations, and cultural consciousness that, as the play goes on to show, cannot be expunged by slaveholders and Christianity. *Slave Ship* concludes with a successful revolt against Christian authorities, accompanied by dance and incited by singing that calls forth a different world: "When we gonna rise up, brother . . . Like the world had just begun?" (143). Baraka also employed incense in everyday life to create an atmosphere conducive to social change: a 1969 *Ebony* article describing Spirit House—the center for black culture, music, and education that Baraka (then LeRoi Jones) established in Newark—suggests that the space is a lesson in "how to make one of those dreary old tenements bright and livable. The foul smell of old wood on the stairwell is in short time replaced with the fragrance of incense. . . ."[4]

Baraka's staging of a world remade through incense, music, and dance resonates with L. H. Stallings's concept of black feminist "funk"—a term whose meanings encompass "nonvisual sensory perception (smell/odor), embodied movement (dance and sex), and force (mood and will)"—as an alternative mode of knowing and being. For Stallings, funk enacts "a rewriting of smell and scene away from nineteenth-century ordering and socialization of corporeal power that represses what stinks, but that does not mean it lacks intelligence or spirituality; rather, it provides other paradigms of

3. Paulla Ebron, *Performing Africa* (Princeton University Press, 2002), 210.
4. David Llorens, "Ameer (LeRoi Jones) Baraka," *Ebony* (August 1969): 82.

intellect and spirit."[5] Whereas liberal humanism has marginalized black people—especially black women—as being excessively subject to the embodied senses, Baraka and Stallings reframe smell and embodiment as generative modes of intelligence.

The stench of the hold—an odor situated at the origins of racial capitalism and its subsequent spatial arrangements (plantation, factory, city, prison)—underscores how the birth of racial capitalist modernity required the deployment of odor—and the affective "atmosfeeling" it generates—as powerful, invisible tools of subjection. Even before slaves were forced into the hold, "medicine men concocted ceremonial baths of brewed plant roots laced with the powers of forgetting, to cleanse people of their old lives."[6] Atmospheric violence has been a powerful force in the history of antiblackness, as Renisa Mawani suggests in her discussion of Frantz Fanon's writings on breath and atmosphere: "How might we read and expand Fanon's observations on the atmosphere to reconceptualize race as a dynamic, mutable, and charged field that permeates and entangles humans, nonhumans, and things?"[7] Nineteenth-century practitioners of racial pseudoscience naturalized these deliberately engineered proximities between black people and noxious odors: whereas Equiano found the historically unprecedented odor of the hold "intolerably loathsome," white commentators—especially when confronted with the possibility of racial integration—maintained that the smell of black bodies themselves was not only racially distinctive, but intolerable.[8] Thus, the structural (and infrastructural) causes of malodor in black spaces—

5. L. H. Stallings, *Funk the Erotic: Transaesthetics and Black Sexual Cultures* (University of Illinois Press, 2015), 4, 6.

6. Tanaïs, *In Sensorium,* 137.

7. Renisa Mawani, "Atmospheric Pressures: On Race and Affect," unpublished MS, cited with permission.

8. See Mark Smith, *How Race Is Made: Slavery, Segregation, and the Senses* (University of North Carolina Press, 2006); also Andrew Kettler, *The Smell of Slavery: Olfactory Racism and the Atlantic World* (Cambridge University Press, 2020).

which, like the stench of the hold, were designed to expose black people to discomfort, sickness, and death—were disingenuously misconstrued as racial traits resulting from (supposedly) poor hygiene, domestic habits, and the distinctive characteristics that racial pseudoscience attributed to black people's lungs.[9]

Black studies scholar Christina Sharpe has introduced the concept of "the weather" to attune us to the ordinary, atmospheric aspects of racial capitalism. For Sharpe, the weather names "the totality of our environments; the weather is the total climate; and that climate is antiblack."[10] The weather is both a cultural climate of antiblackness and a pattern of atmospheric exposures: it draws attention "to the necessity of breath, to breathing space, to the breathtaking spaces in the wake in which we live; and to the ways we respond. . . ."[11] In an interview with Léopold Lambert, Sharpe elaborates that the weather invokes a continuum that encompasses both spectacular deaths such as Eric Garner's suffocation by police and more "gradual strangulation and asphyxiation" resulting from toxic atmospheres. For Sharpe, it is crucial to attend not only to spectacular antiblack violence "but also to those quotidian experiences of unbreathability where really the ability to fully live in a Black body is continually curtailed, foreclosed, continually the enclosure is being reanimated."[12]

Mawani and Sharpe attune us to the role of breathing—as a vital, biochemical, and affective process—in sustaining racial disparities. How have black breathers responded to such toxic atmospheres? Is

9. For a historical study of the "scientific" practices that normalized the notion of racially differentiated lungs, see Lundy Braun, *Breathing Race into the Machine: The Surprising Career of the Spirometer from the Plantation to Genetics* (University of Minnesota Press, 2014).

10. Christina Sharpe, "Antiblack Weather vs. Black Microclimates," interview with Léopold Lambert, *Funambulist* 14 (November–December 2017): 104.

11. Sharpe, "Antiblack Weather vs. Black Microclimates," 109.

12. Sharpe, "Antiblack Weather vs. Black Microclimates," 52.

it possible to transform an unbreathable atmosphere? Is it possible not to? As Ashon Crawley writes of Eric Garner's last words: "'I can't breathe,' also, the enactment of the force of black disbelief, a desire for otherwise air than what is and has been given, the enunciation, the breathing out the strange utterance of otherwise possibility."[13] Sharpe introduces another concept—*black microclimates*—to gloss everyday actions that endeavor to produce more liveable spaces within antiblackness: "certain kinds of acts can shift something so that you are not only being acted upon but you are also shifting something about what's possible to sustain life in that place. You are creating microclimates."[14] These atmospheric modifications do not rely on the fantasy of pure, deodorized air: after all, deodorization campaigns and ideologies of purity have frequently displaced noxious air to poor, black neighborhoods and stigmatized racially coded odors as health threats. Instead, black microclimates—which I will explore below across a range of engagements with the aromatic materials of conjure—involve the production and circulation of atmospheric materials that support the health and collective memory of black diasporic breathers.

Frequently grounded in mundane scenarios of slow violence and atmospheric adjustment, racial atmospheres provide vital points of reference for understanding black olfactory aesthetics. Black microclimates sustain breath, health, and well-being amid the manifold forms of atmospheric violence propagated by slave traders, slaveholders, urban planners, landlords, corporations, and the state. Scent's potentialities as a vehicle of healing and collective memory are especially vital given the extent to which black populations and their experiences have been excluded and/or exploited by the medical establishment and state cultural institutions. Black diasporic olfactory projects exemplify a mode of aesthetic experimentation

13. Ashon Crawley, *Blackpentecostal Breath: The Aesthetics of Possibility* (Fordham University Press, 2016), 2.

14. Sharpe, "Antiblack Weather vs. Black Microclimates," 53.

oriented by racial capitalism's varied "archives of breathlessness," as well as the need to breathe "otherwise air."[15]

Atmospheric Rootwork

Because the sensory regime of antiblackness has disproportionately exposed black populations to noxious or unbreathable air, black olfactory projects frequently manifest as everyday practices of resistance and life support. As historian Andrew Kettler has shown, enslaved people throughout the Atlantic world incorporated odor into a range of syncretic traditions including obeah, conjure, and rootwork. Whereas slaveholders employed bloodhounds to track fugitives by smell, conjure practitioners provided "powders designed to aid runaways by throwing tracking dogs off their scent."[16] Instead of facilitating racial abjection, smells could be deployed in ways that sustain black life.

Although, to some extent, these syncretic practices became decontextualized and commodified in the twentieth century, black urban communities continued to access conjure or hoodoo through local rootworkers and spiritual supply stores. While conjure was widely stigmatized as unscientific and non-Christian, its sensuous qualities also realized what the historian J. T. Roane characterizes as "the essential power of modes of discredited sensual connection in the reformulation of worlds devastated and abandoned by the dislocations of gendered racial capitalism, migration, and the resulting geographies of austerity and social murder."[17] Beginning in the 1920s, a range of scented products associated with conjure—

15. Sharpe, "Antiblack Weather vs. Black Microclimates," 109.

16. Jeffrey Anderson, *Conjure in African American Society* (Louisiana State University Press, 2005), 84.

17. J. T. Roane, "Plotting the Black Commons," *Souls: A Critical Journal of Black Politics, Culture, and Society* 20, no. 3 (July 2018): 21. Roane describes the black women who gathered and sold herbs and roots as "[looking to] the wider Black commons for elements for a fleeting social world despite the ongoing enclosure marked by urbanization" (260).

including perfumes, incense, powder sachets, candles, fumigants, room cleaners, roots, and oils—circulated through mail-order catalogs and spiritual supply stores in northern cities.[18] Advertisements and other marketing materials suggest that consumers attributed magical powers to these materials, including the capacity to enhance charisma, improve health, ward off enemies, purge harmful spirits, inspire love, and even influence legal decisions through the practice of "dusting the courtroom."[19] As the conjure researcher Carolyn Morrow Long notes, the "magic" of Hoodoo commodities "resides in the color and scent of the products. . . . In the early days of the spiritual business, preparations for 'bad work' had an offensive odor; now all products, regardless of their purpose, are highly perfumed."[20] Although it was often dismissed as superstition, the olfactory elements of conjure afforded black urban migrants some degree of control over the disproportionately polluted, poorly ventilated atmospheres they inhabited and inhaled. Subjected to noxious air, olfactory racial stereotypes, and hygienic discourses of deodorization, conjure practitioners transformed the air they breathed by connecting it with syncretic traditions that span black diasporic geographies throughout the Atlantic world. They thus enacted what M. Jaqui Alexander, in her discussion of Sacred knowledge in Vodou and Santeria, characterizes as a "rewiring of the senses" toward embodied encounters with Spirit and transgenerational memory.[21]

For example, Van Van Oil—a mixture of lemongrass oil and alcohol that Zora Neale Hurston identified as "the most popular conjure drug in Louisiana"[22]—features the scent of a grass indigenous to

18. Carolyn Morrow Long, *Spiritual Merchants: Religion, Magic, and Commerce* (University of Tennessee Press, 2001), 99–126.

19. Long, *Spiritual Merchants,* 106.

20. Long, *Spiritual Merchants,* 103.

21. M. Jacqui Alexander, *Pedagogies of Crossing: Meditations on Feminism, Sexual Politics, Memory, and the Sacred* (Duke University Press, 2005), 308.

22. Zora Neale Hurston, "Paraphernalia of Conjure," in *Mules and Men*, 277–80 (Harper, 1990).

Africa (as well as Asia) and cultivated in tropical and subtropical regions such as Louisiana. "Used for luck and power of all kinds," Van Van Oil's fragrance evokes senses of place and diasporic longings far removed from the city's noxious and deodorized spaces. Another popular substance in Hoodoo practice, High John the Conqueror Root, emits a "spicy" scent; practitioners are instructed to maintain the powers of the root by periodically treating it with perfume. Long explains that this "most famous of African American charms" is "carried in the pocket and rubbed when needed; kept in the house as an amulet; 'fed' or 'dressed' with various substances; boiled to make baths and floor wash; soaked in whiskey, oils, and perfumes for an anointing substance; or incorporated into mojo bags and lucky hands."[23] Even more than Van Van Oil, High John the Conqueror root links these olfactory practices with African roots: framing "John de Conquer" as a folkloric figure embodying laughter, trickery, song, and resilience, Zora Neale Hurston writes, "High John de Conquer went back to Africa, but he left his power here, and placed his American dwelling in the root of a certain plant. Only possess that root, and he can be summoned at any time."[24] These aromatic materials enact the transmission of memory that, according to sociologist Katrina Hazzard-Donald, is at the heart of Hoodoo practice: "Hoodoo serves as embodied historical memory, connecting African Americans across generations and tracing their lineage back to their African origins."[25]

Spiritual products—and the social networks in which they circulated—sustained ordinary practices of health and mutual care. In her discussion of the influence of Hoodoo on African American health practices, Hazzard-Donald reports that "Hoodoo drugstores were a significant component in urban folk medicine and home

23. Long, *Spiritual Merchants,* 221.

24. Zora Neale Hurston, "High John De Conquer," in *The Sanctified Church* (Marlowe & Co., 1981), 71–72.

25. Katrina Hazzard-Donald, *Mojo Workin': The Old African American Hoodoo System* (University of Illinois Press, 2012), 11.

remedies in the late nineteenth and early twentieth centuries."[26] The religious studies scholar Theophus Smith observes: "Notably omitted from conventional references is conjure as the use of natural and artificial materials for medicinal and quasimedicinal purposes—that is, conjure as a pharmacopeic tradition of practices . . . conjure as folk pharmacy."[27] Many Hoodoo practitioners were outlawed beginning in the late nineteenth century, when the medical establishment lobbied for legal regulations to expunge competing health practices.[28] The tensions between Hoodoo and biomedicine are evident in their diametrically opposed approaches to olfaction: whereas Hoodoo deploys scents to modify the material and spiritual interface between body and environment, biomedicine demands deodorization as a means of upholding the fiction of a fortified body immunologically sealed off from its surroundings.[29] For practitioners of Hoodoo, smell's capacities to evoke collective and individual memories and to alter mood and behavior may exert considerable (though not easily measurable) effects on physical and mental health.

The techniques of atmospheric intervention associated with conjure draw attention to everyday spaces and activities—like breathing—as sites of constraint and contestation. Conjure remakes the air as a medium that can awaken diasporic memories and affiliations, sustain individual and collective health, and disclose alternative modes of knowledge and action. The works of Toni Morrison

26. Hazzard-Donald, *Mojo Workin'*,154–55.

27. Theophys Smith, *Conjuring Culture: Biblical Formations of Black America* (Oxford University Press, 1994), 5.

28. See Kodi Roberts, *Voodoo and Power: The Politics of Religion in New Orleans 1881–1940* (Louisiana State University Press, 2015), 158.

29. See Ed Cohen, *A Body Worth Defending: Immunity, Biopolitics, and the Apotheosis of the Modern Body* (Duke University Press, 2009). On the prominence of smell in the ecological "miasma" theory of disease emergence that preceded germ theory, see Melanie Kiechle, *The Smell Detectives: An Olfactory History of Nineteenth-Century Urban America* (University of Washington Press, 2017).

and Renée Stout, to which I'll now turn, explore how the scented materials of conjure create microclimates supportive of black diasporic life and consciousness.

Atmospheric Care in *Song of Solomon*

Perhaps Morrison's most evocative writing about scent appears in *Song of Solomon* (1977), a novel preoccupied with black people's atmospheric interactions.[30] Blending historical fiction with magical realist elements, the novel begins and ends with airborne men: in the opening scene, a life insurance agent leaps to his death from a hospital cupola in a failed attempt to "fly away on my own wings" (3); in the final scene, the protagonist, Milkman Dead, leaps off a promontory believing he'll take flight. As Milkman learns toward the end of his quest for self-knowledge, his ancestor Solomon was one of the Flying Africans who flew back to Africa to escape from slavery (322).

Commentators (including Morrison herself) have framed this novel as a coming-of-age story oriented by the Flying African—a folkloric figure associated with Igbo Landing, where a group of Igbo captives who seized their slave ship immersed themselves in a stream after running aground in Georgia. Although some drowned bodies were recovered, enslaved West Africans and their descendants in the region believed that these individuals either flew back to their homeland or were borne back by the water. The Flying African thus emerges from Igbo Landing as a metaphor for both

30. Toni Morrison, *Song of Solomon (Knopf, 1977);* subsequent references cited parenthetically. On Morrison's other olfactory writings, see Ally Louks's discussion of intersectional olfactory othering in *Tar Baby,* "The Smell of Misogynoir: Representing and Redressing Intersectional Olfactory Stereotypes Surrounding Black Women and Girls," in "Olfactory Ethics: The Politics of Smell in Modern and Contemporary Prose," PhD Dissertation (Cambridge University, June 2024), 99–114, and Tanaïs's account of the perfume they designed as a tribute to *Beloved* (*In Sensorium,* 156–57).

refusal and transcendence—a reminder of ongoing connections between the diaspora and their places and cultures of origin.

The titular "song of Solomon," however, does not center the Flying African so much as those he leaves behind: "*O Solomon don't leave me here / Cotton balls to choke me [. . .] Solomon done fly, Solomon done gone*" (303, emphasis in original). By juxtaposing the archetype of flight with the suffering and sorrow of the women and children left behind, Morrison offers a critical perspective on flight and the freedom of mobility as techniques of survival disproportionately available to able-bodied black men who were willing to leave kin and community obligations behind. At the heart of the novel, then, is the question: how can one "ride the air" without leaving loved ones behind?

As a counterpoint to flight, *Song of Solomon* explores smell as another technique for becoming atmospheric. If flight is Milkman's patriarchal inheritance, scent is frequently associated with the novel's women, along with the domestic spaces they inhabit and the acts of care they perform. Milkman's aunt, Pilate, becomes an important mentor as he gains some measure of independence from his father's devotion to bourgeois accumulation. Educated by a migrant "root worker" (142) and described by several critics as a "conjure woman,"[31] Pilate lives with her daughter and granddaughter in an unkempt yet welcoming house suffused with a distinctive odor. Both Pilate and her house are introduced through olfactory details: her brother disparages her "sickening smell" (20); Milkman's friend describes the house as "Shiny and brown. With a smell" (36). Although this smell violates deodorized bourgeois norms, Milkman learns that its main components are the pine trees near Pilate's house and the fermenting wine she produces to support her family. Still, there is something inexplicably appealing about it: Milkman and

31. See, e.g., Kameelah Martin, *Conjuring Moments in African American Literature: Women, Spirit Work & Other Such Hoodoo* (Palgrave, 2012), 79; Donna Aza Weir-Soley, *Eroticism, Spirituality, and Resistance in Black Women's Writings* (University Press of Florida, 2017), 85.

his friend spend hours in the house listening to her talk, because "The piny-winy smell was narcotic" (40).

But not all of the smells in *Song of Solomon* can be traced to physical sources. In a pivotal moment, when Milkman and his friend Guitar are on their way to steal what they believe to be a bag of gold from Pilate's house, Morrison puts the plot on hold to offer a description of an inexplicable smell that spans three paragraphs:

> On autumn nights, in some parts of the city, the wind from the lake brings a sweetish smell to shore. An odor like crystallized ginger, or sweet ice tea with a dark clove floating in it. There is no explanation for the smell either, since the lake, on September 19, 1963, was so full of mill refuse and the chemical wastes of a plastic manufacturer that the hair of the willows that stood near the shore was thin and pale. (184)

Here, Morrison acknowledges the lakeside air, filled with industrial pollutants, as a vehicle of environmental slow violence that affects humans and nonhumans alike.[32] But while the willows' thinning hair indicates how vulnerable living beings are to toxic harm, the focus of this passage is on another inexplicable presence in the air: the elusive "sweetish smell . . . like crystallized ginger, or sweet ice tea with a dark clove" exceeds the issue of environmental toxicity, drawing our attention instead to materials—ginger, sugar, tea, and cloves—whose circulation and intermixture were bound up with the histories of slavery and empire.

If the sweetness of this atmosphere is comforting, it also situates the fictional town of Mercy, Michigan, in the "afterlife of slavery."[33] As Sidney Mintz argues in *Sweetness and Power,* our modern fascination with the sensation of sweetness was entangled with the histories of chattel slavery, empire, and industrialization. Behind the "mill refuse" and plastics factory in Morrison's passage looms

32. Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Harvard University Press, 2011).

33. Saidiya Hartman, *Lose Your Mother: A Journey Along the Atlantic Slave Route* (Farrar, Straus and Giroux, 2007), 6.

the Caribbean sugar plantation, which integrated production and processing under brutal conditions of enslaved labor and provided both a model and a convenient calorie source for industrial-era factories.[34]

The smell of ginger is also shot through with historical tensions, but these have more positive resonances. Like tea and cloves, ginger was brought to Africa and the Americas from Asia through colonial trade networks. Although it was not an inherently or exclusively "African" material, ginger was eventually incorporated into local culinary, health, and spiritual practice on both sides of the Atlantic. Holly Fils-Aime reads the novel's sweet ginger scent as a reference to medicinal uses of ginger in Africa and in Caribbean and Southern practices of Voudun, conjure, and hoodoo, arguing that Morrison's ginger "is the key to traditional beliefs about healing and transcendence that stymie Western rationalism. . . . Ginger itself is inextricably associated with life: as a stimulant for the heart, it serves to counteract some of the evil at large in the world."[35] Like other roots incorporated into African syncretic practices like rootwork and conjure, ginger is also an apt metaphor for rootedness, or connection with ancestral lands including in Africa, the Caribbean, and (for those who moved during the Great Migration) the South. At the same time, like the concept of "diaspora" (which refers to the sowing of seeds, often by the wind), the scent of ginger holds together the concepts of rootedness and volatilized mobility: "the air that could have come straight from a marketplace in Accra" (185).

In the next two paragraphs, *Song of Solomon* follows this "ginger sugar" smell onto shore, where it contributes to the production of a sensory and social divide. Morrison details a smellscape inflected

34. Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (Penguin, 1986).

35. Holly Fils-Aime, "The Sweet Scent of Ginger: Understanding the Roots of *Song of Solomon* and *Mama Day*," *The Griot* 15, no. 1 (Spring 1996): 32.

by architecture, infrastructure, and a complex social geography that separates the wealthy people living near the lake from the those living in Southside, whose disproportionately black residents cannot afford air conditioning:

> Yet there was this heavy spice-sweet smell that made you think of the East and stripe tents and the *sha-sha-sha* of leg bracelets. The people who lived near the lake hadn't noticed the smell for a long time now because when air conditioners came, they shut their windows and slept a light surface sleep under the motor's drone.
>
> So the ginger sugar blew unnoticed through the streets, around the trees, over roofs, until, thinned out and weakened a little, it reached Southside. There, where some houses didn't even have screens, let alone air conditioners, the windows were thrown wide open to whatever the night had to offer. And there the ginger smell was sharp, sharp enough to distort dreams, and make the sleeper believe the things he hungered for were right at hand. To the Southside residents who were awake on such nights, it gave all their thoughts and activity a quality of being both intimate and far away. The two men standing near the pines on Darling Street—right near the brown house where wine drinkers went—could smell the air, but they didn't think of ginger. Each thought it was the way freedom smelled, or justice, or luxury, or vengeance. (184–85)

The air conditioners in wealthy lakeside homes and the open, unscreened windows of the Southside function as technologies of sensorial worldmaking: the air conditioner produces comfortable, deodorized atmospheres where encounters with ambient smells, sounds, and temperatures are carefully controlled; the open window exposes residents not only to toxic industrial emissions but also to this mysterious scent that distorts dreams, desire, and space, evoking connections "both intimate and far away." If the ginger smell evokes heterogeneous geographies of diasporic connection, it is mixed here with other, more familiar smells: "standing near the pines . . . near the brown house were wine drinkers went," Milkman and Guitar are also smelling the "piny-winy" smell of the house they're breaking into (40). Morrison also attunes us to the subjective variations of olfactory perception and association: instead of consciously registering the ginger scent, the young men project

a range of abstract ideas onto the smell. The sweet ginger smell instigates Milkman's actions and his eventual journey southward to explore his "roots," his father's, grandparents' and ancestors' communities—but at this stage of the novel he has only a murky sense of what it is calling him toward.

If flight is the novel's most salient aerial motif, smell lingers in the background as an airborne medium of memory, affect, and black feminist care. For Milkman's sister Corinthians and her lover, it has a soothing effect that sets the mood for acting on transgressive desires: "It was . . . hot enough to make people angry, had it not been for a pleasant smell in the air, like sweet ginger" (199). Porter suggests that making love in this common atmosphere is what they have instead of bourgeois accoutrements like "roses . . . and bottles of perfume" (200). When Milkman visits Circe—an impossibly old woman who once took in his father and Pilate—he is nearly driven away by the stench of the decaying house she inhabits, when the stench suddenly gives way to "a sweet spicy perfume. Like ginger root—pleasant, clean, seductive" (239). This bewitching scent enables him to enter the house, where Circe shares information about his "Indian mostly" grandmother, Sing, and the cave where his grandfather's body was dumped (243). Morrison tells us that "the smell followed" Milkman out of the house; his "gingerly" entry into the woods suggests that he has internalized the scent (249). When he follows his grandparents' roots to the town of Shalimar, Virginia, Milkman encounters "the smell of gingerbread baking" in the home of his grandmother's niece (287, 320). Although the novel never offers a literal explanation for the sweet ginger scent that emanates from the lake over Mercy, Michigan, it repeatedly associates the scent with the everyday lives of black women: Pilate's "piny-winy" home, Circe's witchy "perfume," Susan Byrd's gingerbread.

The scent reappears in the novel's final scene, when Milkman and Pilate return to Shalimar to bury her father's bones where her grandfather Solomon is said to have taken flight. "A deep sigh escaped from the sack and the wind turned chill. Ginger, a spicy sugared ginger smell, enveloped them" (335). Here, Milkman's

grandfather, Jake,[36] takes flight in the form of a volatile scent. Retroactively, this scene hints that the gingery smell in Mercy may have been emanating not only from the lake but from the sack of bones suspended over a doorway in Pilate's house. It also suggests that the novel's recursive sweet ginger smell is linked to Milkman's inheritance, which encompasses both his grandfather's and great-grandfather's capacity for flight and the care with which Pilate recovered and stewarded the bones for decades. Soon afterward, Guitar shoots Pilate and Milkman repeats his ancestor's legendary leap: "For now he knew what Shalimar knew: If you surrendered to the air, you could *ride* it" (337, emphasis in original).

Critics have read this closing sentence as a culmination of Milkman's patriarchal quest for independence, self-knowledge, and ancestral connection: as Michael Awkward puts it, the ending affirms the mythic significance of "transcendent flight" while also exposing this myth as "implicitly phallocentric in [its] inscription of a perpetually inferior—non-'heroic'—status for the female."[37] However, flight also requires a material, aerial medium—an atmosphere that, like seawater, is filled with history's particulates. As Sophia Nahli Allison observes in her documentary on the Flying African legend, "If energy cannot be created nor destroyed then the residue, particles, or remnants of the past and near future live among us, constantly overlapping with the present."[38] Smell attunes us not only to the body in flight but to the aerial medium that holds and sustains flight. Insofar as what we smell are *volatile* molecules (from the Latin *volare,* to fly), the idea of flight is inextricable from

36. "Jake" was also slang for Jamaican ginger, a patent medicine and bootleg drink made from Jamaican ginger that became popular during Prohibition.

37. Michael Awkward, "'Unruly and Let Loose': Myth, Ideology, and Gender in *Song of Solomon*," in *Toni Morrison's Song of Solomon: A Casebook*, ed. Jan Furman (Oxford University Press, 2003), 89.

38. Sophia Nahli Allison, *Dreaming Gave Us Wings,* documentary video (2019), https://www.newyorker.com/culture/culture-desk/revisiting-the-legend-of-flying-africans.

olfaction. The sweet scent of ginger—a root grounded in women's everyday practices of care and conjure, and volatilized into airborne matter—offers another model for surrendering to the air and riding its currents of affect and polychronic resonance. The shift from Solomon to Shalimar—the town's name, and the name that Milkman's Native American great-grandmother always called the man (321)—in this final line also decenters the patriarchal myth of the flying, "invulnerabl[e]" body (220). "Shalimar"—traditionally a woman's name originating from the name of the Mughal royal gardens—displaces the biblical Solomon, evoking the history of ginger's circulation as a product of global trade and intermixture. It also echoes the name of an iconic perfume created by Jacques Guerlain in 1921. While the fragrance "Shalimar" did not contain ginger, several of its "oriental" notes (e.g., bergamot, lemon, rose, vanilla) would have been reminiscent of sweet ice tea.

"Zora Neale Hurston Meets . . . Octavia Butler in the Matrix"

Guerlain's Shalimar also appears alongside references to ginger and the biblical Solomon in *The Rootworker's Worktable,* a 2011 mixed-media work by Renée Stout (Figure 2). The work—which consists of "A 1920's serving table embellished with an embedded light box, vintage technology, constructed 'gauges,' found and blown glass bottles, a 'blackboard' painting and a found rug"—draws attention the importance of aromatic materials in black folk medicine. The painted trompe-l'oeil blackboard conveys a process of improvisation and experimentation, elliptical connections criss-crossing a palimpsest of partially erased terms. In a section labeled "Remember to gather," the blackboard includes the word "Solomon" followed by the letter "S" and an erased smudge—likely a reference to the flowering plant known as Solomon's seal;[39] the blackboard's lower

39. Long notes that Solomon's seal root is among of the roots that herbalists have identified as either High John the Conqueror or Low John the Conqueror root (*Spiritual Merchants,* 228). Stout drew this list of herbs

right corner includes "Ginger" and "*Shalimar Perfume" in a list of "THINGS I'LL NEED FOR THE SEDUCTION OF SteRLING ROCHAMBEAU." Juxtaposed on the board with notes on the properties of High John the Conqueror Root and names of Yoruba and African syncretic orishas and loas, these materials present rootwork as a flexible, open-ended mode of ecological engagement that can incorporate both synthetic perfumes and materials whose origins lie beyond Africa and the Americas.

Like Morrison, Stout draws attention to how syncretic spiritual practices have been adopted and transformed in the diaspora—especially as techniques of atmospheric intervention that sustain black lives and futures. Stout has devoted much of her practice to developing exhibitions that explore African and African syncretic spiritual practices. She traces this interest to her fascination with a Kongo "*nkisi nkondi* figure that . . . enthralled her as a ten-year-old at the Carnegie Museum in Pittsburgh."[40] As art historian Lisa Collins explains, these figures prepared in Kongo territory are "sacred medicines and charms thought to enclose spirits," and they typically contain "things such as leaves, earth, ashes, seeds, stones, herbs, and sticks."[41] Meanwhile, Stout traces her interest in conjure to a spiritual supply store she visited in 1986, and to

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from *Cunningham's Encyclopedia of Magical Herbs* and the glossary of Zora Neale Hurston's *Mules and Men* (Doreen St. Félix, "Playing Hoodoo: Renée Stout and 'The Rootworker's Worktable," *New Yorker* [May 27, 2017] https://www.newyorker.com/culture/culture-desk/playing-hoodoo-renee-stout-and-the-rootworkers-table).

40. Mark Sloan, ed., *Renée Stout: Tales of the Conjure Woman* (Halsey Institute of Contemporary Art, 2013), 119. Subsequent references cited parenthetically.

41. Lisa Collins, "Economies of the Flesh: Representing the Black Female Body in Art," in *Skin Deep, Spirit Strong: The Black Female Body in American Culture,* ed. Kimberly Wallace-Sanders (University of Michigan Press, 2002), 120.

Figure 2. Renée Stout, *The Rootworker's Worktable*. 2011. 78″ × 50″ × 30″. Reconstructed and altered found vintage table, vintage technological parts, blown, hot-formed and found glass, blackboard created with acrylic and oil stick on wood panel, found rug, found objects and constructed objects, and organic materials. Copyright Renée Stout, image by John Bentham.

her encounters with spiritual practices in New Orleans starting in 1989 (121). While conjure, Hoodoo, and related practices have long been suppressed—both within and outside black communities—by secular institutions, bourgeois morality, and Christianity, Stout frames her work as a "way of honoring the ancestors and asserting that, as an African American woman, I owe it to them and myself to keep the door open" (122). In centering black women's everyday

spiritual practices, Stout is inspired by Alice Walker's "In Search of Our Mothers' Gardens" (1972), which documents "how generations of black women were creative even when they had little or no access to conventional art-making materials."[42] Over the years, Stout has taken on two artistic personae, Madame Ching (based on "a black fortune-teller from Stout's hometown of Pittsburgh") and Fatima Mayfield ("based on a local purveyor of healing herbs and potions"), whom she stages as the "descendants" of "old Southern Hoodoo spiritualists."[43] Stout approaches Hoodoo not as a fixed tradition but as a living practice and a resource for black futurity and liberation. She characterizes Fatima in terms that blend folk religion with Afrofuturism, as "a mysterious seer/herbalist/root worker, who can best be described as Zora Neale Hurston meets the science fiction writer Octavia Butler in the Matrix."[44]

Stout's traveling exhibition, *Tales of the Conjure Woman* (2013), presents a mysterious, multisensory assemblage of works unified by the persona of Fatima Mayfield. These works span a range of media: a poster advertising Fatima's services, glass sculptures of Hoodoo roots, a vending machine that appears to dispense roots and herbs, an etching of a recipe for seduction, drawings of figures Fatima saw in dreams, and multimedia installations (including *The Rootworker's Worktable*) that include scented media such as organic materials and perfume bottles. Stout's exhibition includes a number of embedded plots: a Hoodoo seduction, a pilgrimage to the tomb of Marie Laveau, a Christian minister's campaign to suppress Hoodoo, and an encounter in which Fatima seduces and dominates a misogynist. These embedded tales frame the conjure woman as a threat to

42. Andrea Barnwell Brownlee, "Foreword," in *Renée Stout,* ed. Mark Sloan, 10.

43. Nikki Greene, "The Feminist Funk Power of Betty Davis and Renée Stout," *American Studies* 52, no. 4 (2013): 72.

44. Charles Rowell, "Renée Stout," interview, *Callaloo* 38, no. 4 (2015): 880.

both patriarchal hierarchies and the church's efforts to monopolize spiritual authority in the service of bourgeois respectability.

Stout's work frequently alludes to the material and spiritual significance of scent in practices of conjure. An etching titled *The Seduction* (2010) presents a set of "Notes for the Seduction of Sterling Rochambeau" that focuses on the qualities of perfumes. After noting that "Perfume is very important. . . . A hard choice," the work lists and reflects on ten possible perfume choices: "Hmm . . . TABU is a good one—it has that sexy/'skanky' factor (wink)"; "Also BAT-SHEBA! it's perfect for this seduction of 'Biblical' proportions" (75). This olfactory seduction plot, which Stout returns to in several later works, flips the patriarchal script of seduction by playfully countering the respectability associated with the terms "Biblical" and "sterling" with black feminist funk.

Another work in the exhibition, *The Return* (2009), documents Stout's visit to New Orleans three years after Hurricane Katrina. A handwritten account details how the artist employs scent to create an affective microclimate for a stroll through a dramatically altered cityscape: "BEFORE I STEP OUT FOR MY FIRST WALK, I APPLY THE SCENT OF DOUCE AMÈRE TO MY NECK AND WRISTS IN HONOR OF THIS BITTERSWEET OCCASION." Stout's first walk is a pilgrimage to the tomb of the nineteenth-century Voudun practitioner and midwife Marie Laveau: "I LAY FLOWERS, A CIGAR, AND PERFUMES FROM [the New Orleans perfumerie] HOVÉ AT THE TOMB OF MARIE LAVEAU. I HUG HER SPIRIT . . . GLAD THAT I AM 'HOME,' AT PEACE AND WHOLE AGAIN." Stout's olfactory offerings—along with her own scent of Douce Amère—affirm her relationship to the Laveau's memory and to the spiritual practices Stout has studied in New Orleans. Throughout her pilgrimage, scent sustains a microclimate that makes it possible to feel whole and at "home" again in the changed city: "MANY OF THE PLACES I ONCE LOVED HAVE VANISHED, BUT I CAN STILL FEEL THE MAGIC AT HER CORE."

Like Morrison's ginger smell, Stout's work acknowledges conjure's open-ended capacity to incorporate new encounters with

more-than-human materials in and beyond the Atlantic world. With a flexibility that reflects the (often coerced) mobility of diasporic experience, the conjure woman remobilizes commercial perfumes, plants from all over the world, and an array of circum-Atlantic spirits and deities as material supports for the lives and desires of black women. *Erzulie's Arsenal* (2013)—a found wooden container that Stout filled with glass bottles and vials containing organic substances—invokes Erzulie, a group of Haitian (Voudun) loa associated with femininity, women's sensuality, and love.[45] Another work depicts a bottle labeled "Patchuli/ Suerte en Amor"—a reference to both the multilingual communities that use syncretic spiritual products and to a fragrant plant (patchouli) native to Southeast Asia but widely cultivated in the Caribbean for its essential oil. Ironically, this bottle also prominently features a stereotypical portrait of a Native American man in a feather headdress labeled "Indio Ponderoso" (probably an intentional misspelling of "Indio Poderoso")—an image that draws attention to how diasporic olfactory practices can contribute to the transformation of Indigenous smellscapes (and, here, to the problematic rhetorical indigenization of diasporic scents).

In addition to depicting scented roots, herbs, and perfumes, several works in the exhibition include scented powders and perfume bottles: "There are scents. If I open up these cabinets that have the roots and soaps, perfume-like smells come out. There's incense."[46] Noting that "There's even a display of perfume bottles that you can uncork and sniff," critic Mark Jenkins reports, "The scents of musk and flowers may dominate, but just as symbolically important is the aroma of earth—from graveyards and, ultimately,

45. See Roberto Strongman, *Queering Black Atlantic Religions: Transcorporeality in Candomblé, Santería, and Vodou* (Duke University Press, 2019), 43–44.

46. Renée Stout, in Lisa Collins, "'The Evidence of the Process,'" interview, *Transition* 109 (2012): 50.

Africa."[47] According to critic Ed Hall, Stout's inclusion of scents "signal[s] a grasp of neuropsychology—of the way olfactory stimuli intertwine with memory, of contemporary mind models that construe the self not as *I* but as the jostling collective that makes *me*."[48] Scents enable Stout to materialize the atmosphere of conjure in a way that makes her installation not only a representation but an immersive performance: "the work is not just operating on a visual level, as my creative process often becomes a literal ritual with candle and incense burning and the gathering of special herbs, etc., to insert into the work in an effort to promote healing and evoke the protective energies of ancestral spirits."[49] Through the scents of roots and perfumes, Fatima's magic permeates, penetrates, and transforms the bodies and psyches of visitors.

Both on its own terms and as it is represented in works like *Song of Solomon* and *Tales of the Conjure Woman,* conjure attunes us to how scented media can reshape black breathers' sense of the world, even when immersed in antiblack "weather." As a syncretic practice of atmospheric intervention, conjure creates and maintains microclimates conducive to collective memory and black life. In Quashie's words, conjure's atmospheres enable breathers to "[perceive] differently what the world is or looks like or can be—worldmaking."

47. Mark Jenkins, "Women's Work Is Never Done," *Washington Post,* February 25, 2016, https://www.washingtonpost.com/goingoutguide/museums/womens-artwork-is-never-done/2016/02/25/1e423d50-d690-11e5-b195-2e29a4e13425_story.html?noredirect=on.

48. Ed Hall, "Renée Stout's Three Rs: Rootwork, Religion, and Recovery," *Burnaway: The Voice of Art in the South* (March 13, 2014), https://burnaway.org/review/tales-conjure-woman/, emphasis in original.

49. Rowell, "Renée Stout," 881.

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3. Sensorial Estrangement: Smelling Otherwise Worlds

IN WHAT HAS BECOME KNOWN AS THE "Sweaty T-shirt" experiment, a group of researchers led by the Swiss biologist Claus Wedekind asked a group of women volunteers to rate the odors of shirts that had been worn by a group of men based on intensity, pleasantness, and sexiness. Building on earlier research conducted on mice in the 1970s and '80s, this influential 1995 study found that women tend to be attracted to the scents of men with MHC (major histocompatibility complex) genes that are dissimilar to their own. This suggested that body odor could be a mechanism for selecting mates whose dissimilar immune system genes were more likely to produce offspring with stronger immune systems. Although this experiment centered the role of olfaction in heterosexual reproduction among humans, its broader implications point to the queer, counterintuitive ways in which smell can call us toward reproductive intimacies with dissimilar others.

"Smell," writes Tsing, "is a sign of the presence of another, to which we are already responding."[1] This capacity to impel breathers toward otherness has made smell a common motif in speculative fiction. Across a range of speculative narratives, smell calls forth compulsions and otherworldly relationships involving vampires,

1. Tsing, *The Mushroom at the End of the World,* 46.

werewolves, astronauts, aliens, trolls, fungi, hyperosmics, clones, biobots, posthuman hybrids, hyperexploited data workers, "alphas" and "omegas."[2] In these works, smell is not just a theme, device, or character trait but a site of narrative worldbuilding. Situating olfaction as a powerful mode of knowledge and relation unsettles assumptions about perception, embodiment, and individual will at the heart of liberal common sense. In stories like these, smell evokes illiberal desires, transgresses bodily boundaries, and initiates emergent practices of reproduction and care.

Smell's worldmaking potential puts pressure on two concepts that orient conversations in science fiction studies: cognitive estrangement and speculation. Whereas Darko Suvin emphasizes the estranged (and ocularcentric) "*cognitive view*" that science fiction can provide with respect to present norms,[3] this chapter will sit with narratives that enact *sensorial estrangement* by speculatively remixing liberal humanism's normative sensorium, which (as scholars of critical ethnic studies and environmental humanities have shown)[4] undergirds an implicitly white, able-bodied, bour-

2. For werewolves, see Anne Rice, *The Wolf Gift* (Anchor, 2013); for astronauts, Yuri Herrera, "The Cosmonaut," in *Ten Planets: Stories,* trans. Lisa Dillman, 15–23 (Graywolf, 2019); for trolls, *Border (Gräns)*, dir. Ali Abbasi (METAfilm, 2018); for fungi, Silvia Moreno-Garcia, *Mexican Gothic* (Del Rey, 2020); for hyperosmia, Marlon James, *Black Leopard, Red Wolf* (Riverhead, 2019); for data workers, Deji Bryce Olokotun, "We Are the Olfanauts," *Electric Lit* 152 (April 15, 2015), https://electricliterature.com/we-are-the-olfanauts-deji-bryce-olukotun/, accessed December 9, 2024; for "alphas" and "omegas," Omegaverse or A/B/O slash fiction. Vampires, aliens, clones, hybrids, and biobots will be discussed in this chapter.

3. Darko Suvin, "Estrangement and Cognition," in *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (Yale University Press, 1979), 7, emphasis in original.

4. See, e.g., Musser, *Between Shadows and Noise*; Stallings, *Funk the Erotic*; Robinson, *Hungry Listening*; Chuh, *The Difference Aesthetics Makes*; Sachi Sekimoto and Christopher Brown, *Race and the Senses: The Felt Politics of Racial Embodiment* (Routledge, 2020); and *Senses With/out Subjects,* eds. Erica Fretwell and Hsuan Hsu, special issue of *American Literature* 95, no. 3 (September 2023).

geois, settler, and hetero-patriarchal ideal of human exceptionalism. Sensorial estrangement is not opposed to cognitive estrangement: instead, it reframes cognition itself as an embodied, multispecies process distributed throughout the body, its microbiome, and its mediating environments.[5] This resonates with the critic Frances Tran's contention that "recognizing that sight and the visual are embedded in conceptions of spectacle, speculation, and speculative fiction presses us to contemplate what happens to our understanding of the future if we learn to activate the richness and multiplicity of embodied senses."[6] In addition to impressing upon readers that racial and colonial capitalism's sensorial arrangements are violent, unsustainable, and changeable, sensorial estrangement experiments with illiberal modes of sensory relation as pathways toward more livable futures.

The deodorizing imperative to eradicate or cover up certain odors does not just shore up notions of order and hygiene, it also attenuates atmospherically distributed capacities for the "transmission of affect."[7] Olfactory worldmaking brings into focus atmospheric affordances—such as immersion, affect, situatedness, volatility, and embodied memory—that extend the scope of relationality. The works discussed in this chapter—Octavia Butler's *Xenogenesis* and *Fledgling,* Larissa Lai's *Salt Fish Girl,* and Anicka Yi's *In Love with the World*—imagine speculative worlds on the basis of scientific findings about sweaty T-shirt smells, pheromones, and the role of airborne chemosignals in interspecies communication. Extrapolating from olfactory modes of communication and intimacy in which we are already deeply enmeshed, these works explore both the possibilities and ethical questions raised by scent as an impetus toward

5. Melody Jue, for example, draws on Suvin as inspiration for theorizing water as a medium of "sensory estrangement" in *Wild Blue Media: Thinking Through Seawater* (Duke University Press, 2020), 6.

6. Frances Tran, *Sensational Futures: On Asian Racialization and Speculative Aesthetics* (Duke University Press, forthcoming).

7. Teresa Brennan, *The Transmission of Affect* (Cornell University Press, 2014).

posthuman kinships. Instead of framing olfactory relationality in utopian terms, they imagine ambivalent scenarios in which interspecies futures are called forth by the insidious and involuntary qualities of smell.

The Smell of Xenogenesis

Writing in the wake of centuries of atmospheric violence and olfactory "othering" directed against black women,[8] Octavia Butler imagines how smell might be deployed to make otherwise worlds. Instead of ascribing racialized body odors as a tool of segregation or discipline, she explores smell's capacity for forging queer biochemical connections across divisions of race and species. In works such as *Clay's Ark* (1984), "The Evening and the Morning and the Night" (1987), the *Xenogenesis* trilogy (1987–89)[9] and *Fledgling* (2005), she depicts processes of intimacy, reproduction, sociality, and healing mediated by smell. Extrapolating from scientific research and popular beliefs about pheromones,[10] Butler imagines how the visceral and nonvolitional qualities of olfaction might function to expand kinship networks and build alternate futures. In Butler's worlds, smell refuses liberal conceptions of autonomy, demanding instead that characters navigate the challenges of reproduction and community building under conditions of chemical compulsion.

8. See Louks, "The Smell of Misogynoir," 94–131.

9. The trilogy—consisting of *Dawn* (1987), *Adulthood Rites* (1988), and *Imago* (1989)—was republished under the title *Lilith's Brood* in 2000.

10. Martha McClintock popularized ideas about human pheromones when she published a 1971 study suggesting that they mediated the coordination of menstrual periods among women who lived together; this led to fragrance marketing—for example, scents like Marilyn Miglin's Pheromone (1978) and Jovan's Andron ("The Pheromone-Based Cologne for Men," 1981)—that framed pheromones as powerful, nearly irresistible heterosexual attractants. M. K. McClintock, "Menstrual Synchrony and Suppression," *Nature* 229 (1971): 244–45.

Xenogenesis imagines humanity's future as inextricably entangled with the reproductive processes of the Oankali, an alien civilization that survives by selectively interbreeding with species from different planets. The Oankali arrive just after humans (or at least the humans in control of wealthy, nuclear-capable nations) have nearly destroyed the planet through nuclear war. They rescue the remnants of humanity and—beginning with the protagonist, Lilith—carefully select and groom them to resettle Earth as members of interspecies families. While this ensures a future for the humans who have been saved, Butler's representation of interspecies kinship under conditions of captivity is deeply ambivalent. As critics have noted, the novel's posthuman future is interwoven with an exploration of the ongoing racialized and gendered histories of slavery, settler colonialism, eugenics, and biocapitalism.[11]

Scent plays a pivotal role in Butler's world-building. It binds together Oankali kinship networks, suffuses the architecture of Oankali ships and terraformed areas on Earth, and serves as a means of direct chemical communication for Oankali: "Their kinship group areas were clearly scent-marked. Each time they opened a wall, they enhanced the local scent markers—or they identified themselves as visitors, members of a different kinship group. . . . Lilith could not read scent signs."[12] Whereas the cultural imperative of deodorization has eroded many humans' capacity to discern scents, the Oankali are able to both "read" scent and produce "scent signs."

11. See, e.g., Justin Mann, "Pessimistic Futurism: Survival and Reproduction in Octavia Butler's *Dawn*," *Feminist Theory* 19, no. 1 (2018): 61–76; Mark Rifkin, *Fictions of Land and Flesh: Blackness, Indigeneity, Speculation* (Duke University Press, 2019): 73–116; Priscilla Wald, "Cognitive Estrangement, Science Fiction, and Medical Ethics" *The Lancet* 371:9628 (June 7, 2008): 1908–9.

12. Octavia Butler, *Dawn,* in *Lilith's Brood* (Aspect, 2000), 67. Subsequent references to the trilogy are to this edition and will appear in the text.

In addition to marking kinship areas, scent plays a quiet yet powerful role in forging interspecies bonds. The comforting scent of the Oankali (particularly that of their third-gender genetic engineers, the ooloi) counteracts their visual appearance, which humans find alien and terrifying. It enables some humans to enter into—and even enjoy—interspecies reproductive arrangements imposed by the Oankali, who have sterilized all the humans they rescued so that they will only be able to reproduce through xenogenetic intimacies. When a woman whose human partner has been killed is comforted by her Oankali kin, "the first signals [she] received were olfactory. The male and female smelled good, smelled like family, all brought together by the same ooloi. When they took her hands, they felt right. There was a real chemical affinity." Through olfactory and tactile mediation, "Strangers of a different species had been accepted as family" (196).

In the sequels to *Dawn,* we learn that Lilith's hybrid human-Oankali progeny have inherited the Oankali's sensory virtuosity. With "senses . . . more dispersed over his body" (254) than those of humans, and with the capacity to sense molecules and DNA, Lilith's son Akin is able to access reciprocity not only as a philosophy but as a material, sensory experience: "he came to know that he was also part of the people who touched him—that within them, he could find fragments of himself. He was himself, and he was those others" (255). Akin uses his superhuman sense of smell to identify edible plants and gather information "like a bloodhound" (338) as he wanders on Earth, but he is also vulnerable to olfactory influence when he meets a young ooloi whose "scent overwhelmed his senses" (464). The third novel in the trilogy, *Imago,* begins with a detailed account of the sensory changes that occur when Lilith's child Jodahs metamorphoses into an ooloi: "I sat down on the floor and let myself work out the complex combinations of scents" (525). As the novel progresses, Jodahs and its ooloi sibling Aaor repeatedly rely on the olfactory influence of their pheromones to pacify hostile humans: "My scent was at work on her. She would probably have difficulty resisting it because she was not consciously aware of it" (632).

Narrated in the first person, *Imago* offers unfiltered access to Jodahs's posthuman sensorium. Jodahs's response to the scent of its ooloi parent Nikanj, for example, extends across five paragraphs:

> It had an incredibly complex scent because it was ooloi. It had collected within itself not only the reproductive material of other members of the family but cells of other plant and animal species that it had dealt with recently. . . .
>
> Its most noticeable underscent was Kaal, the kin group it was born into. I had never met its parents, but I knew the Kaal scent from other members of the Kaal kin group. . . .
>
> The main scent was Lo, of course. It had mated with Oankali of the Lo kin group, and on mating, it had altered its own scent as an ooloi must. The word 'ooloi' could not be translated directly into English because *its meaning was as complex as Nikanj's scent. "Treasured stranger." "Bridge." "Life trader." "Weaver." "Magnet."* (526, emphasis added)

Nikanj's scent includes traces of all the DNA it has collected from family, and in the course of its genetic study of Earth's plants and animals. It also includes multilayered kinship markers that announce its relations within Oankali and human society. The claim that the meaning of "ooloi" is as untranslatable as scent draws a suggestive analogy between aliens who can sense and manipulate DNA and olfaction, and the suggested (but inadequate) translations that follow—treasured stranger, bridge, life trader, weaver, magnet—all evoke qualities of scent as a volatile medium of bodily and trans-corporeal intimacies.

Although Akin, Jodahs, and Aaor deploy scent in the interest of establishing the possibility of an independent and reproductively viable human settlement on Mars, the Oankali's preternatural capacities both to sense and to manipulate others' sensory responses raise irresolvable questions about consent and coercion under postapocalyptic and posthuman conditions that resonate with histories of circum-Atlantic slavery and antiblackness—especially the constrained choices faced by black women whose exploited reproductive capacities have been essential to racial capitalist worldmaking. Commenting on a passage in which an ooloi "looped a sensory arm around [Lilith's] neck forming an oddly comfortable noose,"

Justin Mann suggests that Butler's figuration of the instrument of sensory evolution as a noose "encompasses the pleasure and pain, history and futurity, and abjection and subjection that constructs late twentieth-century black life."[13] This ambivalence toward interspecies futures forged through olfactory attraction marks a refusal to idealize smell as a utopian solution to the uneven crises of the Anthropocene. Instead, Butler suggests that it is vital to learn how to discern, historicize, navigate, and actively shape the biochemical webs of relation in which our world is already enmeshed.

Funk and Anthropoid-Centrism in *Fledgling*

Butler's final novel, *Fledgling,* revisits many of the themes she explored in *Xenogenesis*: human coevolution with a species that may have come to Earth from outer space, the role of chemosensory pleasure in extending kinship networks, the counterintuitive use of viruses in genetic engineering, and interspecies reproduction as a survival strategy. Like each novel in the *Xenogenesis* trilogy, *Fledgling* opens with a scene of rebirth under conditions of sensory defamiliarization: its protagonist, Shori, awakens in a dark cave, forced to rely on senses like touch, hearing, taste, and smell. Eventually, Shori learns that she has lost her memory after surviving an attack that killed the rest of her family. She also learns that she is Ina—a matriarchal, vampire-like species that survives through symbiotic relationships with blood-providing humans. Shori and her family are targeted for extermination by other, conservative Ina because she is the product of genetic engineering—a human-Ina hybrid whose genetic inheritance from black humans enables

13. Mann, "Pessimistic Futurism," 62. Although Butler famously insisted that "The only places where I am writing about slavery are where I actually say so," my approach follows critics like Mann who situate her work within the ongoing afterlife of slavery—in a racial capitalist world structured by slavery and antiblackness (Stephen Potts and Octavia Butler, "'We Keep Playing the Same Record': A Conversation with Octavia E. Butler," *Science Fiction Studies* 23, no. 3 [1996] 332).

her to survive in sunlight. Shori's hyperosmic abilities enable her to both survive and expose a plot against her family. Following her nose, she tracks the scent trails left by her kin and their attackers, identifies appealing human "symbionts," and singles out potential mates among the Ina.

Butler's vampires are distinguished by their biochemical and olfactory relations. Like the Oankali, the Ina are both hyperosmic and capable of influencing others with their scents; unlike the Oankali, they are also powerfully affected by olfactory signals. Perhaps because it is inextricable from flavor, smell exerts a profound erotic influence on Ina, soliciting them to choose particular Ina mates and human symbionts. When Ina take blood from humans, the humans are both physically pleasured and chemically transformed by the exchange: they take on their Ina partner's scent, and in the process they become subservient to that Ina's wishes. Butler also speculates on how taking smell seriously as a source of knowledge might influence legal proceedings: in Ina trials, the accused and accuser "give the Council the opportunity to make use of their formidable senses. They watched, listened, and breathed the air as we spoke. Together, they had thousands of years of experience reading body language."[14] Legal testimony similarly requires sharing air with others through the embodied and viscerally compelling sense of smell: "I saw, I heard, I breathed their scent" (251).

While the reader might expect some of her lost memories to be triggered by familiar scents, such a moment of olfactory recognition never comes: instead, scent guides Shori toward her biological relatives and new kin relations. She learns that she is strongly attracted to some humans' and Inas' personal scents, and that following her olfactory inclinations leads to strong relationships that appear to be mutually fulfilling. The queer, polyamorous, and interspecies kinship networks of Ina and their symbionts are mediated—and

14. Butler, *Fledgling* (*Seven Stories Press*, 2005), 249. Subsequent references cited parenthetically.

erotically motivated—by scent. To Shori, promising symbionts smell "interesting," "distracting," "healthy," "open, wanting, alone" (15, 311, 98). Scent also conditions relations with other Ina: whereas she enjoys the "dark, smoky" scent of her intended Ina mate, her father (whom she doesn't recognize) has a scent that "made me feel safe, although I couldn't say why"; an elder from another Ina family "smelled good somehow, not in the slightest edible, not even sexually interesting, but good, comfortable to be with" (223, 67, 158). Throughout the novel, scent moves Shori toward a diverse, open-ended, and erotically compatible network of intraspecies and cross-species kinships.

Like the *Xenogenesis* trilogy, *Fledgling* highlights problems of consent posed by the viscerality and immediacy of olfactory relations. When Shori learns that the animal she killed and ate in the cave was a man, she reflects: "his scent should have told me what he was. How was it that he had smelled only like food to me and not like a person at all?" (34). For the Ina, the sensory appeal of scent—inextricably entangled with gustatory and sexual appetites—makes it difficult to distinguish between persons and nonpersons. When she meets Wright, who becomes her first symbiont since her awakening in the cave, Shori explains why she wanted to get into his car: "I realized he smelled . . . really interesting. Also, I didn't want to stop talking to him" (15). These lines encapsulate the contradiction between Shori's appetitive and interpersonal relation to her symbionts: should she use her mouth to consume them or converse with them? As Wright struggles to subdue Shori so that he can bring her to the police or the hospital, his scent overwhelms her: "I didn't have the words to say how good he smelled. . . . I bit him—just a quick bite and release" (16). While Butler reverses the race, gender, and apparent age of the assailant and victim, this scene invokes the motif—featured in novels such as Vladimir Nabokov's *Lolita* (1955) and Patrick Susskind's *Perfume* (1985)[15]—in which

15. See Louks, "The Smell of Misogynoir," 132–55.

an irresistibly seductive fragrance is cited as an excuse for sexual assault. Shori believes that she can bite Wright without doing him any permanent harm. Wright continues to struggle, but once the chemicals in her saliva enter his bloodstream, he comes to desire being bitten by her. This leads to an unsettling sexual relationship that raises difficult questions about consent: can Shori—who is fifty-three years old, has the body of a ten-year-old human child, and has not yet reached sexual maturity as an Ina—consent to a relationship with an adult human whose smell she finds compelling? And what should we make of Wright's furious resistance to Shori's assault, followed by his chemically coerced "consent"? As Shanté Smalls puts it, "How can we . . . see this allegorization of rape as anything but rape?"[16] Unlike some other Ina, Shori and her Ina allies endeavor to treat their symbionts like equal partners (with some notable exceptions, including when first biting them)—but kindness does not compensate for the immense power differential between Ina and their symbionts (the term "symbiont" usually refers to "the smaller member of a symbiotic pair.")[17]

While Smalls points out troubling resonances between *Fledgling*'s sexually predatory child (or child-like) protagonist and the exploitation, sexual objectification, "adulting" and demonization of black children, other critics argue that Butler's novel navigates conditions of ethics and embodiment that exceed the presumptions of liberal humanism. Elizabeth Lundberg reads the novel as a staging of queer relationality, arguing that it "draws on BDSM-informed ideas of consent and relational, embodied subjectivity to highlight how the liberal humanist subject has been destabilized."[18] L. H. Stallings reads *Fledgling* as a paradigmatic in-

16. Shanté Smalls, "Transaesthetics, Transing, and the Legacies of a Black Girl-Child Figure," *Syndicate* (March 20, 2017), https://syndicate.network/symposia/literature/funk-the-erotic/.

17. *Merriam-Webster Dictionary*, "symbiont." https://www.merriam-webster.com/dictionary/symbiont. Accessed December 11, 2024.

18. Elizabeth Lundberg, "'Let Me Bite You Again': Vampiric Agency in Octavia Butler's *Fledgling*," *GLQ* 21, no. 4 (2015): 566.

stance of "funk"—a black feminist mode of embodied intelligence that reorders the liberal sensorium "by privileging smell and internal kinetic energy in black communities." Stallings argues that Shori's erotic experience of scent enables an unruly approach to polyamory led by embodied desire, rather than by liberal notions of ethical, contractual "love": "Butler's focus on funk's privileging of olfaction provides an out from the Western romance narrative that suggests one love to complete or fulfill the self as modern and civilized." For Stallings, smell discloses otherwise worlds and sexual relationalities that exceed patriarchal and capitalist conceptions of humanism. "Olfaction," she writes, "is not a Platonic sense. To walk with it and to make it a part of one's culture evokes a new understanding of life and humanity."[19]

Despite Butler's nuanced engagement with smell as a subject of speculative worldmaking, *Fledgling* ultimately presents an ambivalent account of olfactory relationality. If smell and chemical compulsion shape a world that refuses liberal models of agency, Shori's unprecedented status in that world (as an Ina-human hybrid produced through genetic experimentation) reintroduces the notion of individual agency. After being guided primarily by visceral olfactory desires in the novel's early chapters, Shori is persuaded that it would beneficial to follow Ina practice of seeking out additional symbionts—a lawyer and a young man with experience in "business administration" (158)—who would be well positioned to help her manage the wealth and rental properties[20] she has inherited. While hyperosmia makes other Ina susceptible to sensory overload, Shori displays an unusual capacity to distance herself

19. Stallings, *Funk the Erotic,* 14, 133.

20. Benefiting from rental properties and other real estate holdings held over the course of centuries while living on farms, orchards, ranches, and other secluded complexes, the Ina are thoroughly enmeshed with U.S. settler colonialism. Like Butler's *Earthseed* and *Xenogenesis* trilogies, *Fledgling* presents readers with the difficulty of imagining worlds in which survival does not rely on settler infrastructures.

from olfactory sensations—and to manipulate, taxonomize, and resist them. In one scene, when a barrage of scents threatens to overwhelm her as she rushes through the woods, she slows down to analyze them: "All I cared about were the scents drifting in the air and what they could tell me. I stopped every now and then to take a few deep breaths, turning into the wind, sorting through the various scents. . . . Standing still, eyes closed, breathing deeply, I could sort through far more scents—plant, animal, human, mineral—than I wanted to bother with" (103). Instead of experiencing scents (as many humans do) as fleeting, volatile, and difficult to pin down, Shori is able to produce a mental "scent picture" (64)—a metaphor that suggests she is uniquely able to relate to scent as a "Platonic sense," with the distance and detachment typically associated with visual spectatorship. When one of her symbionts is murdered, Shori gathers olfactory information from the corpse, "*selecting out* scents that were not her own, *separating* them into odors and groups of odors that I recognized" (257, emphasis added). Shori also learns to distance herself from olfactory compulsions: nearly overcome by the scent of her intended mate, she resists the urge to bite him; viscerally repulsed by "olfactory keep-out signs" left on symbionts whose Ina have been murdered, she bites the women anyways in order to save their lives (116). Shori even inquires about the possibility that female Ina might deliberately influence people with scent: "can you control the way it affects people or who it affects?" This question is left unanswered; instead, Shori's interlocutor simply points out that Shori's scent is already quite powerful for a child: "I don't want to imagine what you'll be like by the time you come of age" (222). Shori's olfactory agency—including her resistance to olfactory compulsion—is exceptional even among the Ina.

As a work of sensorial estrangement, *Fledgling* is shaped by the tension between Shori's olfactory libido—which establishes intimate relationships through visceral, biochemical responses—and her capacity to resist, categorize, and instrumentalize smells. Shori's contradictory capacity to both feel the force of olfactory "funk" and maintain some distance from chemical compulsion enables her

not only to survive but to protect her kin. As Melody Jue explains, this capacity to resist olfactory reactions distinguishes Shori from the novel's antagonists: the group of reactionary Ina who assault Shori and her family are deeply offended by her because, as a racialized human-Ina hybrid, she "smells 'wrong'" to them.[21] The novel's central conflict pits Shori's expansive and diverse olfactory desires against the olfactory prejudices of Ina who are viscerally repulsed by her scent.

Noting that bodily smells are "the collective exudation of our symbiotic microbial communities," Jue argues that "Butler did not quite push past an anthropocentric view as much as she could have" (18). In addition to microbial symbionts, Shori screens out a host of other more-than-human scents that do not appear related to her immediate concern of protecting her kin: "eyes closed, breathing deeply, I could sort through far more scents—plant, animal, human, mineral—than I wanted to bother with" (103). Elsewhere, as she runs through the woods, Shori reflects on the scent of horses: "My scent apparently disturbed them. Yet their scent had become one of the many that meant 'home' to me" (111). Unlike the reciprocal olfactory desires that structure most human–Ina relationships, Shori's olfactory exchange with nearby horses is asymmetrical: her scent disturbs them, while their scent (which may include pheromones that communicate their fear) comforts her. Despite the fact that most Ina live with their symbionts in rural settlements secluded from sensorially overwhelming cities, *Fledgling*—like *Xenogenesis*—turns out to be surprisingly anthropocentric (or anthropoid-centric) in its representation of scent as a medium of interspecies intimacy. *Salt Fish Girl,* by the Asian Canadian novelist Larissa Lai, offers a more extensive engagement with the ecological implications of scent—specifically, its unpredictable entanglements with GMO produce and DNA derived from fish.

21. Melody Jue, "Scenting Community: Microbial Symbionts in Octavia Butler's *Fledgling*," *Journal of Science Fiction* 4, no. 1 (July 2020): 18.

"We Can Still Catch the Scent of the Latent Commons"

Lai articulates a theory of sensorial worldmaking in "The Sixth Sensory Organ" (1996), an evocative essay that blends sensorial speculation with queer-of-color memoir. She writes that, through centering her own experience and remaining receptive to change, "it becomes possible to imagine and create new worlds by beginning with the assumption of their existence and then leaving them open to modification. The ability to do both of these things requires the use of every sense available from the most verifiable to the most intuitive."[22] Critics have argued that Lai's novels challenge Suvin's definition of science fiction as a genre that centers "a white male understanding of progress and modernity," aligning her work instead with a lineage of migrant "speculative fiction" that estranges conventional understandings of science itself in order to "foster alternative forms of connectivity that exceed and defy the privatizing logics of nation, corporation, and nuclear family."[23] In addition to acknowledging Octavia Butler's influence as a model for "dream[ing] us into the future in relationship across racial difference,"[24] Lai has explicitly differentiated her work from male science fiction writers who depict smell in dystopian terms, such as Spider Robinson (author of *Telempath,* a novel in which people's heightened sense of smell often leads to suicide) and Cormac McCarthy (author of *The Road,* in which the air is a source of planetary and respiratory

22. Larissa Lai, "The Sixth Sensory Organ," in *Bringing It Home: Women Talk about Feminism in Their Lives*, ed. Brenda Lea Brown (Arsenal, 1996), 214.

23. Paul Lai, "Stinky Bodies: Mythological Futures and the Olfactory Sense in Larissa Lai's 'Salt Fish Girl,'" *MELUS* 33, no. 4 (Winter 2008): 175; Bahng, *Migrant Futures,* 20.

24. Tenea Johnson, "3 Minutes with Larissa, Author of *When Fox Is a Thousand*" (August 12, 2020), https://www.teneadjohnson.com/3-minutes-with-larissa/. Accessed December 15, 2024.

devastation and which, as Lai notes, problematically dispenses with women "before the action begins").[25]

Salt Fish Girl (2002) builds a world suffused with the pungent odours of diasporic foods that are often stigmatized or outright prohibited for transgressing sensory norms. Elsewhere, Lai notes that Canadian expectations for Asian migrants to assimilate demand the suppression of such sensory attachments (which detrimentally affects traditional foodways that support cultural identity and mental, physical, and social health):

> I will eat whatever's laid before me, regardless of where it came from. Roast pork, salt fish, fried tofu, sweet gai lan and then snake soup, eel hot pot, stir-fried dog. . . . Wait! We don't eat those things any more. They've been conveniently forgotten in our eastward journey to the West. You must forget the parts of yourself that prove the bigots right after all, regardless of the cost.[26]

Lai singles out the queer, racialized sensory excess associated with the odors of durian and salt fish. These intense odors communicate with her characters on both cultural and genetic levels, materializing possibilities for more-than-human kinship and queer-of-color reproduction that exceed the erotic constraints of the heteronormative family.

Salt Fish Girl consists of two interwoven narratives: one set in South China in the late 1800s and early 1900s and the other set in and around a walled city on the west coast of North America in the years 2044–2062. The first thread features an incarnation of Nu Wa, the half-serpent, half-human deity who created humans in her own image. Reincarnated as a young woman in the nineteenth century, Nu Wa falls in love with the daughter of a salt fish merchant, runs away with her, eventually drowns, and is transmuted into a durian seed. The dystopian future storyline focuses on Miranda Ching, a

25. Paul Semel, "Exclusive Interview: 'The Tiger Flu' Author Larissa Lai," paulsemel.com (October 22, 2018), https://paulsemel.com/exclusive-interview-the-tiger-flu-author-larissa-lai/.

26. Lai, "Sixth Sensory," 202.

young woman whose body emits the sulphurous odor of durian and who ends up working at the laboratory of Dr. Flowers, a corrupt gene scientist who engineers clone workers for corporations by blending genes sourced from fish and racialized populations. The two plots intersect when Miranda falls for a former clone worker named Evie Xin who smells of salt fish because, in order to bypass legal regulations on human cloning, she was genetically engineered to be "point zero three per cent *Cyprinus carpio*–freshwater carp."[27] Miranda turns out to be another incarnation of Nu Wa, connected to the goddess through the material agency of a mutated durian tree. Together, Miranda and Evie join a community of fugitive clones who work to undermine the corporate order founded on the work of legally nonhuman clones, and who thrive on queer, posthuman practices of biological and social reproduction.

The novel's world is structured by an array of sensorially differentiated (and differentiating) atmospheres. The walled corporate-owned city of Serendipity, where Miranda grows up, is "an assimilationist space of olfactory neutrality"[28] that privileges visual engagement with gleaming storefronts and GMO foods that were "always vibrant bright and regular in shape and color" (30–31). Miranda's father works remotely through the visual and haptic mediation of a virtual-reality "business suit" that turns his work as a tax collector into an adventurous video game. By contrast, in the "Unregulated Zone" outside Serendipity's gates, "the air grew thick with the smell of old petrol, sulphur, urine and rotten food. . . . It was too dirty and too foul smelling" (37). Even in the Unregulated Zone, atmospheres are engineered in an effort to align sensory and biopolitical hierarchies: Dr. Flowers's clinic "smelled too conspicuously of bleach" used in an effort to create a sanitary atmosphere (99); riot

27. Larissa Lai, *Salt Fish Girl* (Thomas Allen, 2002), 158. Subsequent references cited parenthetically.

28. Stephanie Oliver, "Diffuse Connections: Making Sense of Smell in Canadian Diasporic Women's Writing," PhD Dissertation (University of Western Ontario 2014), 260.

police later use a cloud of "supertoxic chemical irritant" to disperse a crowd of activists outside the clinic. In the nineteenth century, when Nu Wa is taken to the "Island of Mist and Forgetfulness" (which shares its acronym with the International Monetary Fund),[29] forgetfulness is actively induced not only through promises of profit and uplift, but also by atmospheric mist. The novel is suffused with both slow and spectacular forms of atmospheric violence, as when factory workers are poisoned by chemical inhalations and prison guards turn off the heat to punish unruly inmates. In *Salt Fish Girl,* racial capitalism relies on both genetic and atmospheric engineering brought to bear on (ultimately uncontainable) projects of biopolitical control. The novel's Pacific Economic Union—the territory governed by a union of six corporations—forms the acronym "PEU," suggesting that its regimes of spatial control and biological rationalization are premised on a culturally constructed response to stigmatized tastes and smells: "pee-yew!"[30]

These sensory and atmospheric practices of racial capitalist worldmaking are unsettled by the novel's speculative engagement with the suppressed sense of smell. As critics have shown, Lai's deployment of culturally stigmatized scents critiques and refuses liberalism's injunctions to forget about bodily and historical truths. These truths include: (1) the psychological and social costs of cultural assimilation, which demands the suppression of smells associated with diasporic community; (2) the repressed queer and interspecies intimacies evoked by the erotic charge of durian and salt fish scents, which are presented as active agents in all of the novel's erotic scenes; and (3) the resurgence of suppressed histories of colonial violence associated with strange scents and with the novel's mysterious "dreaming disease," which I will return to shortly. Messy and unpredictable olfactory encounters unsettle the sensory and racial logics of the novel's corporate geographies and

29. Bahng, *Migrant Futures,* 162.
30. Oliver, "Diffuse Connections," 262.

genetic engineering projects. Through sensorial estrangement, the novel attunes us to the "diffuse connections" catalysed by smell.[31] These olfactory connections refuse to be bound to the composed, individual body: they solicit unruly relations across spatial, generational, racial, and species divides.

Salt Fish Girl draws attention to two pungent objects—durian and salt fish—that often feature in "atmo-Orientalist" discourses directed against smells perceived as "Asiatic."[32] Early on, Miranda describes the scene of her conception, which occurred when her father brought her mother an illicit durian: its odor—"intriguing, yes, and familiar too, and also illicit"—both inspires and suffuses her parents' intercourse: "as they tumbled to the floor, it tumbled between them . . . its pepper-pissy juices mixing with their somewhat more subtly scented ones and the blood of the injuries it inflicted with its green teeth."[33] Shortly after this scene—in which the durian is an active participant in the exchange of scents and fluids—Miranda's mother becomes pregnant, despite being "a good eight years past menopause" (15). Miranda's account of her childhood begins with several pages of olfactory description conveying not only the odor of durian but the subtle ways in which Miranda's scent permeated her family home:

> The unpleasant cat pee odour oozed from my pores and flowed into every room. It swirled around the coffee table, glided smoothly over the couch and poured over the rug [. . .]. It crept under bedroom doors into the private rooms of each family member [. . .]. It rushed up their nostrils and in through ears. It poured down their throats when they opened their mouths to speak.[34]

The verbs in this extended catalogue underscore the unruly material agency of scent as it transgresses the architectural and corporeal boundaries of the heteronormative household. The "all-

31. Oliver, "Diffuse Connections."
32. Hsu, *The Smell of Risk,* 113–51.
33. Hsu, *The Smell of Risk,* 15.
34. Hsu, *The Smell of Risk,* 17.

permeating" (16) trans-corporeal mobility described here conveys how, for a time, the durian's odor tends to linger and even emanate from the bodies of its eaters.[35]

The themes of sensory excess and visceral response are common in writings about durian. While some early Western accounts of the fruit were positive, colonial relations soon led Europeans to "regard [durian consumption] with great puzzlement that further reinscribed the difference and maintained the racial hierarchy between colonizer and colonized."[36] In *Salt Fish Girl,* this colonial and racializing response of olfactory disgust is evident in early responses to Miranda's smell. A range of characters—including Miranda herself—initially denigrate her "cat pee odour" as a marker of class, femininity, sexuality, animality, impropriety, and racialized contagion.[37]

Lai's erotic treatment of durian also resonates with the writings of durian enthusiasts, which detail how the fruit challenges erotic and economic autonomy: as food studies scholars Gaik Cheng Khoo and Jean Duruz write, "Once captivated by the sweet aroma of durian, we durian lovers are no longer agents in control of our desires, freedom, or as it turns out, our pockets! Michael Pollan raises the possibility of plants acting as agents by utilizing scent in their quest to attract animals and humans as seed dispersers in order to fulfill their evolutionary destiny."[38] "Durian lovers" (a term not limited to the human species) are entrained by the fruit's smell into participating in a process of interspecies reproduction. While Lai's novel invokes popular associations between durians

35. On trans-corporeality, see Stacy Alaimo, *Bodily Natures: Science, Environment, and the Material Self* (University of Indiana Press, 2020), 2.

36. Gaik Cheng Khoo and Jean Duruz, "A Whiff of Southeast Asia: Tasting Durian and Kopi," in *Aromas of Asia: Exchanges, Histories, Threats*, eds. Gwyn McClelland and Hannah Gould (Pennsylvania State University Press, 2023), 91.

37. For extensive discussions of olfactory racism in the novel, see Oliver, "Diffuse Connections," and Paul Lai, "Stinky Bodies."

38. Khoo and Duruz, "A Whiff of Southeast Asia," 90–91.

and sexual potency, it delinks these ideas from patriarchal (and anthropocentric) framings that associate durian with male fertility and single it out as the "king of fruits."[39] In presenting durian sensations as an occasion for extending kinship networks, *Salt Fish Girl* also resonates with accounts of durian feasting as a communal and celebratory experience that renews relations through what anthropologist Lisa Law terms calls "the production of an alternative sensorium."[40] The kin-making work of scent is on full display in the brief period when Miranda's family is first overwhelmed by her scent: it enables her parents to fall in love for the first time and suspends her family in a "new-found state of bliss"; this bliss extends to the more-than-human world, reframing what others would perceive as overgrown and unsightly landscaping as a delightful "riotous exuberance of life" (18).

The novel's other salient odoriferous object—salt fish—is evocative of life's oceanic origins and humans' shared genetic inheritance with fish. Miranda reveals that she inherited a strange anatomical feature—fistulas behind her ears[41]—from her mother, and that they seemed to serve "the function of memory, recalling a time when we were more closely related to fish, a time when the body glistened with scales and turned in the dark, muscled easily through water. This is why, when pressed, the liquid they release smells of the sea" (107–8). These fistulas open onto intergenerational and interspecies temporalities, many of which are tied to historical traumas. This intergenerational, maternal, and interspecies inheritance enacts relations of sensory reciprocity: Miranda doesn't just smell it in the scent of salt fish but also emits a series of scents (sea-brine

39. See Khoo and Duruz, "A Whiff of Southeast Asia," 95.

40. Lisa Law, "Home Cooking: Filipino Women and Geographies of the Senses in Hong Kong"; on durian and the role of durian feasts in renewing kin relations, see Jennifer Wong, "A Bay Area Love Letter to Durian," *KQED* (March 7, 2023), https://www.kqed.org/arts/13925835/durian-bay-area-love-letter-singaporean-culture. Accessed December 14, 2024.

41. The novel expands on Lai's earlier speculations on fistulas in her 1996 essay, "Sixth Sensory."

and durian) for others to smell. While these scent emissions are involuntary—unlike those of Butler's ooloi—they also exert powerful influences when inhaled. In addition to these resonances across deep time, the smell of salt fish also evokes memories of childhood and "complicated" feelings associated with weaning, Miranda notes that Evie "stank of that putrid, but nonetheless enticing smell that all good South Chinese children are weaned on, its flavour being the first to replace that of mother's milk" (48). Here, Lai offers a sophisticated account of olfactory recognition: instead of comfort or nostalgia, the childhood resonances of this scent elicit feelings associated with nourishment, loss, and a substitution that "defamiliarizes the naturalized role of women as reproductive beings."[42] Lai underscores that neither salt fish nor durian are naturally occurring scents in the novel's setting: both Evie's fishy scent and the durian trees capable of growing in British Columbia's cold climate are outcomes of genetic engineering.

Encounters with these smells are a distinctive formal component of the novel, which is structured around powerful yet elusive moments of olfactory anagnorisis. Lai explains that she was interested in how scents "tap into a visceral, bodily sense of memory, that kind of immediate connection one gets to a moment in the past when one is confronted by scent."[43] Scent—even when its provenance is uncertain and mixed—induces an embodied sensation, a desire that sets Nu Wa in motion: "The scent of the fish, or perhaps her scent, or, more likely still, some heady combination of the two wafted under my nose and caused a warmth to spread in the pit of my belly. I followed her" (51). For Miranda, scent enacts a sensation of recognition without a discrete object (and perhaps without a discrete subject, either), stretching the boundaries of self and knowledge:

42. Oliver, "Diffuse Connections," 292.

43. Larissa Lai, "Future Asians: Migrant Speculations, Repressed History, and Cyborg Hope," *West Coast Line* 38, no. 2 (2004): 173.

> I caught a whiff of a familiar fragrance, briny and sweet [. . .] Afterwards I wasn't sure what had happened. I had recognized something, but had no idea what. It felt as though something inside me was stretching, had always stretched to that moment of recognition, in the past, a stretching without knowing, a longing without certainty of the object[. . .] This knowing without consciousness of what it was I must remember ate at me. (105–6)

> I caught a whiff of something subtler, and infinitely sweeter [and] I myself was shocked by this odd glimpse of clarity, this moment of knowing. (150)

The knowledge communicated in these moments is at once compelling and elusive. What does olfactory recognition communicate, and what does it withhold? Scent maintains a measure of opacity, refusing to render knowledge as transparent or complete. Thus, when Miranda first recognizes Evie's salt fish scent, Evie refuses her claim: "You're full of shit. How can you know anything?" Evie's challenge takes the form of a question about knowledge production, drawing attention to smell not only as a fundamentally affective and relational mode of encounter but also as a sensory method for *unlearning* bounded, commonsense conceptions of identity, community, and temporality.

In the novel, Miranda is just one of many people showing symptoms of the "dreaming disease"—an emergent condition whose symptoms include "foul odours of various sorts that follow the person without actually emanating from the body, psoriasis, sleep apnea, terrible dreams usually with historical content, and a compulsive drive to commit suicide by drowning" (100). Dr. Flowers—the geneticist sought out by Miranda's father to treat her durian odor—treats numerous patients afflicted with the dreaming disease. When she begins working for him, Miranda sees patients who include "a man who smelled of milk and could remember all the famines that had ever been caused by war" and "a girl who smelled of stainless steel and could recite the lives of everyone who had ever died of tuberculosis" (101–2). Another victim, "a girl who smelled of cooking oil[,] remembered all the wars ever fought"

(85). These odoriferous dreams resonate with recent research on the intergenerational inheritance of trauma, and frame smell as a capacity that can materialize and make perceptible suppressed and ongoing histories of colonial and capitalist violence.[44] Although biomedical discourses characterize these dreamers' unruly smells as "foul odors," the scents of milk and cooking oil invoke scenarios of nourishment that might mitigate some of the suffering caused by war and famine—thus, the scents could emerge as a kind of counterhistorical wish fulfilment. The odor of stainless steel similarly suggests that access to modern infrastructures might help mitigate tuberculosis, but it simultaneously reminds us that industrial materials like stainless steel are themselves the source of toxic smells and other harmful externalities that disproportionately affect vulnerable populations.

Olfactory recognition extends to these instances of historical violence, whose ongoing connections to the novel's present have been obscured by colonial agnosia. As Bahng writes, "The dreaming sickness becomes Lai's vehicle for positioning the intertwined histories of war, labor, and the environment as the precondition for the age of genetic modification."[45] As a condition that materializes intergenerational, transnational, and interspecies olfactory relations, the dreaming disease situates Lai's novel within BIPOC futurism's broad "program for recovering the histories of counter-futures" (to invoke Kodwo Eshun's definition of Afrofuturism).[46] Smell's distinctive, "polysynchronous" capacity to evoke past experiences in visceral, embodied, yet elusive terms is essential to the braided form of Lai's novel, whose "nonlinear temporality . . . shows human history to be cyclical, recursive, reincarnate, and transpositional."[47]

44. Bahng, *Migrant Futures,* 160–61.

45. Bahng, *Migrant Futures,* 153.

46. Kodwo Eshun, "Further Considerations on Afrofuturism," *CR: The New Centennial Review* 3, no. 2 (2003): 288.

47. Tullett, *Smell and the Past*, 88. Michelle Huang, "Creative Evolution: Narrative Symbiogenesis in Larissa Lai's *Salt Fish Girl*," *Amerasia Journal* 42, no. 2 (2016): 122.

In addition to erotic and intergenerational historical relations, olfactory recognition draws Miranda toward a future oriented by generative multispecies intimacies. As Bahng explains, *Salt Fish Girl* critically engages with finance capitalism's efforts to imagine and extract profit from "genomic futures." Bahng traces how the Human Genome Project (1990–2003) shifted its focus "from the study of mutation [in the context of the atomic bombings of Hiroshima and Nagasaki] to the more profitable science of DNA recombination and genetic engineering."[48] This financialized approach to genetic research—designed in pursuit of profit and a securitized, calculable future—is evident in efforts to develop genetically modified foods (referenced by the enormous fruits eaten by the novel's elites), or the recent "cultivation of a smell-less durian, its characteristic stink bred out through the crossing of different varieties of the durian tree."[49] It also drives recent research by Unilever and University of York scientists who identified the genetic pathway for "the bacterial production of thioalcohols, an important component of the characteristic body odor smell," which could pave the way for the genetic deodorization of human bodies (despite the fact that smelling other people's body odor can reduce social anxiety).[50] In addition to offering a critical account of market-driven genetic research, *Salt Fish Girl* explores the potentialities inherent in unpredictable, unruly processes of genetic mutation that exceed the normative, profit-driven constraints of capitalist science. Building on evolutionary biologist Lynn Margulis's argument that "incorporative symbiosis (long-

48. Bahng, *Migrant Futures,* 154, 159.

49. Paul Lai, "Stinky Bodies," 178.

50. Society for General Microbiology, "Bacterial Genetic Pathway Involved in Body Odor Production Discovered," *ScienceDaily* (March 30, 2015), www.sciencedaily.com/releases/2015/03/150330213947.htm. Accessed December 11, 2024. Ben Quinn, "Exposure to Other People's Sweat Could Help Reduce Social Anxiety, Study Finds," *Guardian,* https://www.theguardian.com/society/2023/mar/26/exposure-other-peoples-sweat-help-reduce-social-anxiety-study. Accessed December 11, 2024.

term relationships between different species) . . . is the primary mechanism that generates new organs, tissues, and even species," Michelle Huang reads the novel as a narrative of "symbiogenesis" in which serendipitous reproductive relations among humans, fish, and durians enact the emergence of a queer, more-than-human future.[51]

Lai's olfactory plot is entangled with the figure of the Asian clone worker, which brings together the themes of "racialized histories of genomics, the financialization of science, and transpacific labor."[52] In the later chapters of *Salt Fish Girl,* Evie introduces Miranda to a fugitive group of Asian clones, the Sonias. These rebel clones—produced through a xenogenetic process to serve as superexploited not-quite-human workers in a shoe factory—are thriving in the unregulated, mutated commons walled out by corporate enclosures like Serendipity. They reproduce their community not only through xenogenesis (involving an extraordinarily fertile durian tree) but through intergenerational networks of care, storytelling, and political activism. Their worldmaking extends to industrial sabotage: in an effort to inspire further acts of resistance and refusal, they surreptitiously distribute subversive messages (including some clones' individual life stories, artworks, poems, and polemics) molded into the soles produced at the shoe factory.

While hiding out with the Sonias, Miranda recognizes her origins and engages in a sensuous encounter that—like all of the novel's scenes of carnal pleasure—is animated by olfactory recognition. Her partner in this encounter is the mutated durian tree grown from a seed that the earlier incarnation of Nu Wa intermingled with in the early 1900s:

> But the thing that most shocked and astonished and at the same time oddly comforted me was the odour that poured from the fruits, wafted off the leaves and seeped from the bark. It was the same heavenly

51. Huang, "Creative Evolution," 121.
52. Bahng, *Migrant Futures,* 149.

> cat-piss-and-pepper odour that had been the bane of my childhood existence, the odour that still trailed me around like a stray dog.
>
> I felt the tree pulling at me, as though I were a small moon caught in the gravitational field of a heavy planet. (221)

When Evie picks a durian from the tree and offers it to Miranda, Miranda tastes it: "an overwhelming sense of wonder compelled me. I scooped the creamy yellow flesh into my mouth, felt its taste and odour merge with my own" (224). This encounter is both radically xenogenetic and auto-erotic: since this durian is likely related to the one that fertilized Miranda's mother, her ingestion of its "creamy yellow flesh" is not only somewhat cannibalistic but also potentially incestuous. Like the clone community of Sonias, the intergenerational kinship between Miranda and previous/future incarnations of Nu Wa "call[s] into question the force of individualism."[53] We later learn that Miranda/Nu Wa is pregnant, presumably as a result of this fertile durian fed to her by a community of queer, fishy clones.

By estranging readers from deodorizing conceptions of smell (which either minimize it or reduce it to commodified and hedonic encounters with a narrow olfactory range), *Salt Fish Girl* holds space for other modes of olfactory engagement and relation. If these sensuous encounters elicit the olfactory recognition of suppressed historical continuities, they also draw Miranda into an alternate future defined by genetic and relational serendipity. Unlike the corporate, enclosed settlement of "Serendipity" where Miranda spends her childhood, Anna Tsing emphasizes serendipity as a vital quality of more-than-human worldmaking: "one could say that pines, matsutake, and humans all cultivate each other unintentionally. They make each other's world-making projects possible. This idiom has allowed me to consider how landscapes more generally are products of *unintentional design,* that is, the overlapping world-making activities of many agents, human and not human."[54] As an

53. Bahng, *Migrant Futures,* 165.

54. Tsing, *The Mushroom at the End of the World,* 152, emphasis in original.

atmospherically distributed medium available across many species divides, scent plays a powerful role in catalyzing these serendipitous intimacies and collaborations between human and nonhuman agents. As the biologist Lyall Watson writes, "Before sight and sound hijacked our attention, we shared with all life a sort of common sense, a chemical sense that depended on direct contact with matter in the water or the air."[55] If we share with nonhuman life not only a vast extent of genetic code but the capacity to know the world through chemosensation, then smell may offer an alternate "common sense" (or *sensus communis*) for making multispecies relations in a postnatural, genetically transformed molecular commons.[56] Despite the ecological devastation wrought by racial and colonial capitalism, Tsing writes, "We can still catch the scent of the latent commons" (282).

Salt Fish Girl concludes with a series of breathless revelations about a genetic and biochemical commons—a new, mutated, and racialized "wild" that refuses to be captured for labor and heteropatriarchal reproduction. "I thought, we are the new children of the earth, of the earth's revenge," Miranda/Nu Wa muses, shortly before entering a hot spring to give birth to a child fertilized by the pungent durian she consumed (259). This hot spring, filled with salt and minerals, presumably shares a "rotten-egg smell" with the sulphurous river from which Nu Wa—and humankind—emerged in the novel's opening paragraphs (2). In the final paragraph, both Miranda/Nu Wa and Evie find their legs fused together into long, serpentine tails, their skin turned scaly. By bringing Miranda and Evie together, attracting Miranda to the Nu Wa–infused durian, and then attracting them to the fresh mountain air and the salt-scented

55. Qtd in Paul Lai, "Stinky Bodies," 183.

56. Tullett employs the term "molecular commons" to underscore that "We are embedded in a vast web of chemical communications between species in which smelling and odorants play a prime role" (*Smell and the Past,* 28).

hot springs, scent has been an indispensable catalyst for this scene of queer, diasporic, multispecies futurity.

However, Lai also confronts her characters with smells that at first seem relatively unburdened by history. After liberating themselves from Dr. Flowers, Miranda and Evie drive into mountains filled with "trees green and living, exhaling their contemplative cedar scent and casting blue-green light over the crumbling road in a lacy pattern. . . . The mist and cedar air rushed through the [car's] broken window" (265). Among these trees is another corporate genetics facility, where they walk into a puzzling building:

> And then the curious round cabin appeared. A ring of thick cedar logs for its sides and a roof that spiraled up and ended with a skylight at the top. "They commissioned a Native architect, Agnes Bishop, to design it," said Evie. "As though purchasing her labour would somehow connect their project with the land."
>
> [. . .] The cabin revealed its shape—a spiral, like a snail shell, or the body curled fetal, door where the head goes, toilet at the centre, where the tail could curve in. And the skylight directly above. Was I meant to make something of this, was the cabin design a riddle? (268)

Although Lai notes earlier that the Diverse Genome Project—purchased by the corporation that employed Dr. Flowers around the time Evie was born—"focused on the peoples of the so-called Third World, Aboriginal peoples, and peoples in danger of extinction" (160), the novel does not otherwise reference Indigenous people until this scene, just a few paragraphs before it ends. In two distinct scenes, the scent of cedar—a sacred tree and vital companion species for the Stó:lō,[57] Squamish, Musqueam, and other Indigenous

57. In her monograph on the significance of cedar in Pacific Northwest Indigenous cultures, Hilary Stewart includes this creation story for red cedar told by the Stó:lō elder Bertha Peters: "There was a real good man who was always helping others. Whatever they needed, he had; when they wanted, he gave them food and clothing. When the Great Spirit [Xá:ls] saw this, he said, 'That man has done his work; when he dies and where he is buried, a cedar tree will grow and be useful to the people—the roots for

nations in the Pacific Northwest—remains opaque to Miranda and Evie. Whereas durian, salt fish, and the scents associated with the dreaming disease have concrete historical referents, cedar (whose deep associations with collective continuance I discussed in chapter 1) strikes Miranda only as "contemplative," "fresh," and "green" (155, 265). For Miranda, the "curious round cabin" made of cedar and designed by a "Native" woman poses a "riddle," but she quickly comes up with an answer based on the toilet in the center of the building: "This is a story about stink, after all, a story about rot, about how life grows out of the most fetid-smelling places. I leaned into the wall of the coiled cabin, snail, the body curled in upon itself, spine coiled, a snake lying in wait" (268).

These scenes—in which a novel preoccupied with scent as a diasporic medium of collective memory lingers with a scent tied to Indigenous collective memory—raise difficult questions about tensions between diasporic and Indigenous modes of sensorial worldmaking. Does dismissing the building's spiral design and cedar construction as merely an act of corporate appropriation participate in the erasure of Indigenous epistemologies? Does interpreting the construction biomorphically as a coiled snake project the Chinese myth of Nu Wa onto Indigenous land and architecture? Does framing the building as an allegory about "stink" dispel the lingering fragrance of cedar and the histories and relations held by that scent? The ambivalent names Lai chooses for her characters (Miranda echoes Shakespeare's *Tempest,* and "Evie Xin" translates as "New Eve"—an echo of the longstanding settler myth of the "American Adam")[58] suggest that their migrant, posthuman status remains entangled with settler colonial geographies. While Lai explores how

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baskets, the bark for clothing, the wood for shelter" (qtd in Hilary Stewart, *Cedar: Tree of Life to the Northwest Coast Indians* [University of Washington Press, 1995], 22). See also Fikile Nxumalo, *Decolonizing Place in Early Childhood Education* (Routledge, 2019), 54–70.

58. R. W. B. Lewis, *The American Adam: Innocence, Tragedy, and Tradition in the Nineteenth Century* (University of Chicago Press, 1959).

scent can evoke intergenerational connections with past violence and complicity—for example, one dreaming disease patient "could recall and recount every death, every rape, every wound, every moment of suffering that had ever been inflicted by a member of her ancestral lineage" (85)—even this expansive framing does not account for the position of diasporic settlers who benefit from settler colonialism even when their ancestors did not directly commit such violence, and even when their ancestors suffered historical violence in other places.

In dwelling on Miranda/Nu Wa's lack of historical or personal connections with the scent of cedar, my intention is not to find fault with *Salt Fish Girl*'s focus on diasporic memory. Instead, I wish to draw out the questions provoked by the "contemplative cedar scent" and "curious round cabin" that Miranda/Nu Wa and Evie pass through on their way to a site of queer, interspecies worldmaking. Can diasporic worldmaking—the new possibilities for conviviality and relation made possible by transplanted, mutated forms of life—coexist with Indigenous cosmologies? How can we draw on—and redistribute—the worldmaking capacities of smell while also supporting efforts to decolonize smellscapes? As Lai writes in a 2013 essay on Asian diasporic and Indigenous relationality, it is imperative to "begin to imagine how we might live, work, and make culture in relation to one another, and to the animal, vegetable, and mineral worlds differently from the ways in which . . . state politics and global capital have allowed thus far."[59]

Love Is in the Air

Commissioned for the Tate Modern's spacious Turbine Gallery, Anicka Yi's *In Love with the World* (2021) extends Butler and Lai's speculative experiments with multispecies olfactory intimacies into

59. Larissa Lai, "How to Do 'You': Methods of Asian/Indigenous Relation," *Recherches Anglaises et Nord-Amériques* 46 (2013): 12.

a multisensory staging of human-AI symbiogenesis. Yi's installation features an intricate and constantly evolving series of interactions among biomorphic airborne machines, visitors, and gallery staff. Their forms reminiscent of jellyfish and amoebas, the machines (called "aerobes") float in the vast overhead space, displaying a range of shifting moods and behaviors. At times, an aerobe might display curiosity or sociability, drawing close to humans or other aerobes; others might shy away, remain still, or quietly investigate a space recently vacated by another aerobe. At unpredictable times, aerobes descend to a maintenance area, where they are attended to by gallery staff. These behaviors are governed by complex algorithms that, as Yi emphasizes, enable the aerobes to behave, interact, and evolve in unforeseeable ways. The gallery's atmosphere—shared by aerobes and humans—also transforms over the course of the exhibition, presenting a series of scents that correspond to changes in the aerobes' behavior patterns. The constant dance of interactions mediated by a scented atmosphere evokes the imagined scenario that oriented Yi and her collaborators when planning the exhibition: "[We] imagined machines that could breathe, smell, and have an organic response to their environment. We thought of machines living 'in the wild,' engaging with plants and animals, independent from humans."[60]

In Love with the World brings together, on a monumental scale, two themes explored in Yi's earlier works. Several of her installations—most notably *You Can Call Me F* (The Kitchen, 2015) and *Life Is Cheap* (Guggenheim Museum, 2017)—incorporate scents associated with women in Yi's network, and with Asian diasporic women and spaces. In *Life Is Cheap,* a diorama that blends a circuit board with a living ant colony that communicates via scent challenges "techno-Orientalist" stereotypes that associate Asiatic

60. Anicka Yi et al., *Anicka Yi: In Love with the World* (Tate Publishing, 2021), 103. Subsequent references cited parenthetically.

racialization with technological abstraction.[61] In two works exhibited at the 2019 Venice Biennale, Yi stages intimate encounters between organic materials and machines: *Biologizing the Machine (terra incognita)* features soil infused with a bacterial colony and machine sensors that registered the odorous gases emitted by those microbes; *Biologizing the Machine (tentacular trouble)* presents animatronic moths that inhabit—and could potentially feed on—cocoon-like forms composed of dried kelp. Yi's deployments of scent as a medium offer a rejoinder to patriarchal and racist discourses that associate unruly odors with femininity and racial otherness.[62] Her experiments with biologized machines similarly unsettle ideological tendencies that associate machines either with masculine rationality or with abstract, disembodied calculation.

Visitors to the Turbine Hall enter the aerobes' space, whose scale and verticality unsettled human norms of movement and perception. Noah Feehan, who collaborated with Yi on the exhibition's technical design, explains that the scale, alterity, and opacity of the aerobes could evoke visceral responses in human visitors: "Images and video cannot elicit the autonomic response you feel near them in person—a flood of cortisol and oxytocin, the uncanny blend of fight-or-flight mixing with the intense protectiveness of one's kin" (78). Like Butler's Oankali, Yi's aerobes present an occasion for relationality that has no precedent. They unsettle not only bodily biochemistries but conventional ideas about the scope of kinship. Both their sentience and their sensorium are unaccountable: "you find yourself wondering what they want, and there is no straightforward answer. The aerobes sense the building itself, the state and position of every other aerobe—and of you, for

61. See David Roh, Betsy Huang, and Greta Niu, eds., *Techno-Orientalism: Imagining Asia in Speculative Fiction, History, and Media* (Rutgers University Press, 2015); Long T. Bui, *Model Machines: A History of the Asian as Automaton* (Temple University Press, 2022)

62. See Rachel Lee, "Metabolic Aesthetics: On the Feminist Scentscapes of Anicka Yi," *Food, Culture, & Society* 22 (2019) 692–712.

that matter" (78). Unlike the vast majority of computers and AI technologies—which have been oriented by human aims (specifically, by militarized, visual processes of "target discernment"), the aerobes exhibit a form of machinic intelligence that refuses anthropomorphism while remaining deeply interested in learning about humans in the gallery.

Yi frames *In Love with the World* as an intervention in AI discourses that emphasizes the ethical and relational implications of embodied intelligence. In place of the "purely cognitive focus" that characterizes much of the research and public understanding of AI, Yi centers the "sensory ecology of intelligence" (103)—intelligence as an evolving mode of understanding grounded in embodied and affectively charged encounters with the world. This intervention builds on recent shifts in AI research: as the feminist science studies scholar Elizabeth Wilson explains, researchers since the mid-1990s have "contend[ed] that sensory, perceptual, and corporeal data form the frame within which cognitive faculties emerge. The skills and competencies that develop in an artificial entity as it engages directly with the world generate a distributed intelligence that is robust and responsive and has the capacity for growth."[63] Yi's interest in unpredictable, co-evolving relations among humans and aerobes foregrounds the affective affordances of artificial embodied intelligence, acknowledging that machines "can as readily be a means for affective expansion and amplification as for affective attenuation" (30).

Yi's approach to sensorially engaged AI inverts conventional efforts to bring AI to bear on the embodied senses. The startup Aryballe, for example, "uses artificial intelligence and digital olfaction technology to mimic the human sense of smell, help[ing] their business customers turn odor data into actionable information."[64]

63. Elizabeth Wilson, *Affect and Artificial Intelligence* (University of Washington Press, 2010), 4.

64. Bernard Marr, "Artificial Intelligence Is Developing a Sense of Smell," *Forbes* (May 10, 2021), https://www.forbes.com/sites/bernardmarr

For businesses like Aryballe, the goal is not to explore smell's capacity for making relations but to gather and leverage olfactory data; possible applications include engineering more effective "'new car' smells," "[reducing] R & D time for new foods and beverages," or "[detecting] food spoilage in consumer appliances."[65] In their critique of machine learning applications in olfactory research, cognitive scientists Ann-Sophie Barwich and Elisabeth Lloyd discuss a "shockingly uninformed" statement by a member of the Google AI team working on understanding how chemical structure relates to olfactory sensation: "*Based on analogous advances in deep learning for sight and sound,* it should be possible to *directly predict the end sensory result of an input molecule,* even *without knowing the intricate details of all the systems involved.*"[66] As Barwich and Lloyd explain, this claim erroneously analogizes olfaction with vision and audition; it thus downplays the biological complexity of the olfactory system, which involves "high stimulus–response variation based on a genetically highly heterogeneous sensory system, resulting in divergent perceptual responses to physico-chemical information."[67] Instead of reducing olfaction to the extraction and analysis of chemical data, *In Love with the World* is deeply invested in the unruly affects and relations disclosed by smell.

Yi and her collaborators were influenced by "In Praise of Wetware," a contribution to an MIT forum on Ethics, Computing, and AI by the art historian Caroline Jones. Jones contrasts the centralized, computational model of intelligence that orients most AI research with an emergent understanding of intelligence as

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/2021/05/10/artificial-intelligence-is-developing-a-sense-of-smell-what-could-a-digital-nose-mean-in-practice/.

65. Marr, "Artificial Intelligence Is Developing a Sense of Smell."

66. Cited in Ann-Sophie Barwich and Elisabeth Lloyd, "More than Meets the AI: The Possibilities and Limits of Machine Learning in Olfaction," *Frontiers in Neuroscience* 16 (August 31, 2022), https://www.frontiersin.org/journals/neuroscience/articles/10.3389/fnins.2022.981294/full. Barwich and Lloyd's emphasis.

67. Barwich and Lloyd, "More than Meets the AI."

something distributed throughout our bodies and environments. "Unlike the machines we build," writes Jones,

> humans are full of wet, chemical signals. We are pulsing with fluids and symbionts, leaky with secretions, riddled with ancient evolutionary paths working in concert with fancy new myelinated nerves and an awesome neo-cortex. Our architectures, workspaces, and medical technologies have never truly accommodated our damp, squishy, feely parts. Let's face it, computational models of cognition have never been fully adequate to the wetware within, or the biological environment without.[68]

What might machines be like if they could engage with the world through messy, embodied processes like metabolic exchange, chemosensation, and microbial symbiosis? What if machine intelligence were located not just in central processing units but dispersed across surfaces teeming with chemicals, microbiota, and sensory stimuli—similar to how we have "ectopic" olfactory receptors "distributed in many different tissues throughout the human body" including the skin, blood, and vital organs?[69] What if machines, like humans and a range of nonhumans, were designed to enact sensation, intelligence, memory, and affect in distributed modes—through continuous and shifting interfaces with material environments? Jones's reflections informed Yi's effort to realize a "wet," biomorphic artificial intelligence that has an open-ended capacity for symbiogenetic evolution through messy and continuously shifting sensory engagements with the world.

In addition to exploring a distributed and embodied model of intelligence, Yi also rejects the tendency to imagine AIs in anthropocentric terms, either as replacements for human workers or as

68. Caroline Jones, "In Praise of Wetware," unpublished essay cited with permission.

69. Désirée Massberg and Hanns Hatt, "Human Olfactory Receptors: Novel Cellular Functions Outside of the Nose," *Physiological Reviews* 98, no. 39 (July 2018): 1739.

machines for "human augmentation."[70] From the Turing test (which assessed machinic intelligence based on the criterion of indistinguishability from human performance) to the framing of Artificial General Intelligence as an AI that exhibits human-level intelligence, research on artificial intelligence has centered the human as metric and implicit beneficiary. This anthropocentric framing also shapes research on "Emotional AI," which focuses on surveilling or replacing human affective labor. Yi's aerobes, by contrast, were inspired by nonhuman forms of embodiment, communication, and thought. When designing the program that generated their behaviors, Yi and her software engineer "spent months and months trying to be very fastidious to avoid anything that seemed too human-centric, too anthropomorphic" (50). Instead, they found inspiration in the behaviors of the moon jellyfish, as well as leaf venal systems, hyphae growth in mycelial networks, and stigmergy (the indirect coordination of actions through the environment) "as observed in ants and bees" (79). The two types of aerobes that floated about in the Turbine Hall included tentacled "xenojellies," which resemble enormous jellyfish, and more blob-like "planulae," which were "coated in a fine substance meant to invoke cilia" (47). Tentacles and cilia are apparatuses of distributed intelligence that contain sensory neurons tuned to tactile, chemosensory, and thermal stimuli. Yi's aerobes evoke Donna Haraway's evocation of "tentacular thinking" as a mode of theorizing and worldmaking ("tentacular worlding") attuned to the ongoing "graspings, frayings, and weavings" of sympoeitic assemblages.[71] The coloration of the xenojellies' tentacles was evocative of the "veiled lady mushroom"—a reference not only to the "funky umami smell of mushrooms" but also to the underground mycelial networks they create (47). As Yi explains,

70. See, e.g., Sarah Dégallier-Rochat et al., "Human Augmentation, Not Replacement: A Research Agenda for AI and Robotics in the Industry," *Frontiers in Robotics and AI* 9 (October 2022), https://www.frontiersin.org/journals/robotics-and-ai/articles/10.3389/frobt.2022.997386/full.

71. Haraway, *Staying with the Trouble,* 33, 42.

the planulae "are drawn to areas where the xenojellies have spent some time, and they work on connecting these areas through a vein-like, hyphae pattern" (113). Hyphae are strands of the mycorrhizal network—the "wood wide web" featured in the research of ecologist Suzanne Simard[72]—that enables trees to communicate and share resources with each other through fungal networks. In addition to these mycorrhizal networks, fungi also communicate by means of volatile organic compounds with "complex scent profiles," which "may play crucial roles in the formation and regulation of symbiotic associations and in the distribution of saprophytic, mycorrhizal, and pathogenic organisms in the ecosystem."[73] Yi's suggestion that her planulae trace hyphae in the air evokes the idea of an aerial mycelium—an atmospheric network for chemosensory communication and mutual, interspecies care. Through an act of "conceptual displacement" that defamiliarizes our ideas about the affordances of air,[74] this evocation of aquatic and subterranean forms reframes the atmosphere—typically envisioned as empty—as a thick and saturable milieu.

Yi conceives of air as "a sculpture that we inhabit"—an immersive medium of "biological and material entanglement, where invisible molecular information is metabolized between living organisms and their environment" (73). Instead of performing "intelligence" as a disembodied, rational, or anthropocentric project, Yi's aerobes stage atmospheric modes of sensing such as thermoception and olfaction that are typically sidelined by ocularcentrism. Equipped with thermal sensors, the "xenojellies are interested in the heat signatures of visitors in the Turbine Hall, and will often gather and interact in the air above large warm-bodied groups (human

72. See Shouhei Tanaka, "Ecological Network Aesthetics and the Wood Wide Web," *ASAP/Journal* 7, no. 1 (January 2022) 119–44.

73. Yuan Guo et al., "Sniffing Fungi—Phenotyping of Volatine Chemical Diversity in *Trichoderma* Species," *New Phytologist* 277 (2020): 244.

74. On "conceptual displacement" as "a method of defamiliarization to make our terrestrial orientations visible," see Jue, *Wild Blue Media,* 6.

or otherwise)" (113). Thermoception—a sensory register that, in infrastructurally privileged spaces, is often deliberately avoided or dampened by HVAC technologies (especially in climate-controlled art galleries)—senses the complex interactions between ambient temperatures, humidity, shade, clothing, metabolism, and individual preferences. Although it is somewhat contingent upon culture, infrastructure, and *habitus,* thermal sensation has both immediate and cumulative effects on people's physical, cognitive, and emotional states.[75] When deliberately sought out, the warmth of other bodies is often associated with pleasure, comfort, affection, and sociability—a sensory component, perhaps, of the "love" referenced in the title of Yi's installation.

Like warmth, scent draws attention to the air as a shared medium. Breath sustains all living creatures in the Turbine Hall; among both living creatures and artificial aerobes, air mediates the transmission of affect. As we have seen throughout this book, scent can evoke visceral affective responses, register toxic atmospheres, trigger dormant memories, or elicit new relationships. By pumping a series of scents into the gallery, Yi creates the impression that the aerobes can sense both human visitors and their shared air through the sense of smell. The exhibition's carefully designed scents are intended to

> connect the aerobes to the deep-time history of the Bankside site and all other organisms that share this habitat. We wanted to teach the aerobes about earthly life and the possibilities and risks that are embedded in air, without saddling them with our own biases of "good" and "bad." Since visitors to the Turbine Hall will also react to the ambient smells, the scentscapes create multiple layers of symbioses between the aerobes, the scent molecules, and the warm-bodied visitors. (111)

These scentscapes, designed in consultation with cognitive psychologist and environmental odor expert Pamela Dalton, stage both the long environmental history of the surrounding area and the

75. On the cultural and social implications of thermal mediation, see Nicole Starosielski, *Media Hot & Cold* (Duke University Press, 2021).

abrupt changes introduced by the Bankside Power Station, a massive "cathedral of power"[76] that generated electricity from 1891 until it was decommissioned in 1981, and was subsequently converted into the Tate Modern. *In Love with the World* invites human visitors to participate alongside aerobes in a collective, sensory encounter with atmospheric transformations brought about by natural and anthropogenic forces across deep time.

Each of the exhibition's epochal and historical scentscapes references a set of olfactory notes, which Yi associates with "corresponding effects on aerobes' moods and behaviours" (Table 1). These scentscapes incorporate distinctive smells associated with each period: the marine and algal scents of the Precambrian era, when the land was bare of animal and plant life; the odors of rotting meat and dinosaur flatulence (whose methane gases have been linked to the period's increased global temperatures) during the Jurassic; the combined smells of decay (associated with contagious miasmas) and spices believed to ward off plague during the Black Death; the smells of horse sweat and imported trees and teas during nineteenth-century outbreaks of cholera. The "Cholera" scentscape—in which black tea evokes the international and imperial trade routes that facilitated the transmission of epidemic disease—would have been especially resonant in the context of the Covid-19 pandemic.

What might these shifting scentscapes "teach" aerobes and human visitors about the long environmental history of the region? The exhibition provokes comparisons between the atmospheres of earlier epochs and the "fuel oil, smoke, ozone, burning coal, pipe tobacco" that compose the modern, "Machine Age" scentscape. The "uncomfortable, stressed," and asocial behaviors that this industrial atmosphere appears to elicit in the aerobes—and potentially in

76. Rowan Moore and Raymund Ryan, *Building Tate Modern: Herzog & De Meuron* (Tate Gallery, 2000), 182. Completed in 1963, the redeveloped Bankside Power Station was located opposite St. Paul's Cathedral; its architect, Giles Gilbert Scott, incorporated elements from his earlier design of Liverpool Cathedral.

Table 1. Anicka Yi Studio, Odorant Notes

Scentscape	Odorant Notes	Behavior Adjectives	Aerobes' Subjective Mood
Precambrian	Marine, oceanic, blue-green algae, ozone, dirt	Introspective, absorbing depth and scale	High dedication to navigation, little awareness of others
Jurassic	Flatulence, spoiled meat, leafy greens, earth after rainstorms	Curious yet heavy	High interest in sharing atmospheric information
Late Jurassic	Fresh grass, minerals, damp soil, spoiled meat	Explorative, curious	High interest in the environment and each other, low interest in visitors
Cretaceous	Jasmine, leafy greens, cypress, ginger root	Investigative, informed	Increased interest in sharing atmospheric information
Roman	Vinegar, animal urine, smoke	Social yet assertive	High interest in environment and dedication to fulfilling own needs
Black Death	Cinnamon, cloves, orange, decayed organic matter	Confusion	Low motivation for visitor encounters, seeking closeness with each other
Tudor	Blood, decayed organic matter, sulfur, gunpowder	Cavalier, risk-taking	Extremely interested in others and the environment
Bankside–Southwark	Musk, fennel, earth after rainstorms	Communal, orderly	High interest in sharing atmospheric information
Bankside–Cholera	Black tea, cypress, sweat from horses	Compassionate, closeness	High interest in visitors and each other
Machine Age	Fuel oil, smoke, ozone, burning coal, pipe tobacco	Uncomfortable, stressed	Increased interest in bodily autonomy and boundaries

Odorant notes developed by Anicka Yi Studio for the olfactory "scentscapes" in *In Love with the World*, Yi's 2021 Hyundai Commission at Tate Modern. Created in collaboration with Dr. Pamela Dalton of the Monell Chemical Senses Center, each scentscape evokes environmental odors drawn from the shifting atmospheres of the Bankside site across time. Table by Anicka Yi Studio; courtesy of the artist.

human visitors, too—contrast with the more exploratory, sociable behaviors ("High interest in the environment and each other"; "interest in sharing atmospheric information") associated with earlier periods. These noxious and distressing industrial odors reference the ninety-year period during which the Bankside Power Station generated electricity by burning coal and oil. One of Yi's goals for the exhibition was to provoke questions and conversation about atmospheric disparities: "who gets to breathe good clean air and who does not, and how social inequities impact this." These concerns about "atmospheric justice" were heightened by the Covid-19 pandemic, which constrained many people's access to the exhibition and (for those who chose to remain masked) its scentscapes when it opened in October 2021 (55–56). Witnessing the aerobes' dynamic responses to different historical atmospheres would have attuned visitors to the differentiated and socially conditioned air as a medium of affect and sociability. How might different social and technological arrangements produce different atmospheres, and how might those atmospheres transform the conditions of human and more-than-human relation?

The exhibition also provokes questions about the aerobes' own energy consumption and emissions. After all, even as they sense and respond to historical atmospheres, the aerobes themselves are among the most technologically advanced products of the fossil-fueled Machine Age. The noxious odors of the Anthropocene include emissions generated by aerobes themselves, as well as the gallery lighting and climate control that sustain the exhibition's baseline conditions. Although a "Climate Impact Report" (152–54) details various measures taken to reduce and offset the project's carbon emissions, the aerobes also appear to sense and respond to the exhibition's own emissions. This draws attention to the precarity of atmospheric perception as a means of accessing intimacy with others: if smell and other modes of atmospheric sensing could potentially make the aerobes curious about humans—and about other aerobes—the smells emitted by the Machine Age also stress them out and lead them to seek isolation. This is all the more ironic

because, for both aerobes and humans, those industrial effluvia are of our own (unevenly distributed) making. They are social byproducts that erode sociality.

While Yi's aerobes were not actually capable of smelling, her biomorphic machines and scentscapes stage the possibility of a more-than-human world held together by reciprocal olfactory relations. For example, the installation inspired the writer Elvia Wilk to write "The Fog" (2021) a short story in which moth-like biobots were designed to serve humans as hyperosmic disease sniffers. The moths' algorithmically programmed "capacity to learn as they moved through the world" leads to a serendipitous symbiogenetic development: they begin responding to the smells of humans by "emit[ting] their own powerful and otherworldly smells."[77] Perceiving these spontaneous emissions as a threat, their designers decommission the moths and put them on public display in a museum-like "Archive." The story focuses on the narrator, a gallery attendant who begins developing their own responses to the moths' odors: namely, a hypersensitivity to smell, a sense of kinship with the moths (they lose their job after acting to protect a moth from a visitor enraged by its smell), and a fog-like "experience of shrinking, and then of becoming part of something I'd thought I was external to . . . a feeling of being mixed up, then dissolved."[78] Wilk's story extrapolates from Yi's installation a first-person account of olfactory response not as an individual feeling but as an "otherworldly" series of biological, sensorial, and ethical transformations.

In literary narratives and speculative artworks, scent can be a powerful medium for exploring more-than-human kinships across precarious and unevenly distributed atmospheres. In their works of sensorial estrangement, Butler, Lai, and Yi imagine worlds premised on a radically different sensorium. Instead of channeling research on pheromones into fragrance commodities and discourses that

77. Elvia Wilk, "The Fog," in Yi et al., *Anicka Yi,* 140, 144.
78. Wilk, "The Fog," 143.

reinscribe heteropatriarchal relations, their works experiment with scent as a biochemical incitement toward transformative intimacies with aliens, vampires, mutated fruits, clones, and biomorphic robots. In addition to attuning us to the affective, erotic, and ethical complexities of olfactory relations, as well as to their polychronic capacity to interlink past and future atmospheres, these works demonstrate how speculative fiction can contribute to expansive approaches to understanding—and understanding with—the senses.

Coda: Collective, Intersensorial, Incommensurable

THIS BOOK HAS EXPLORED a series of concepts and aesthetic experiments that exemplify the affordances of olfactory worldmaking. Through close analysis of narratives and practices oriented by scent, we have explored how smellscape redistributes access to sensory memory, how olfactory projects such as conjure materialize microclimates supportive of black life and cultural continuity, and how speculative narratives deploy scent to stage desires and kinships that exceed the scope of liberal humanism. Across all these examples, olfactory worldmaking leverages the collective nature of atmosphere to reshape the scope and contours of lived, breathed, and embodied community.

I would like to conclude by reflecting on two complicating factors—intersensoriality and incommensurability—that I have not had sufficient space to address in detail, and that I hope will offer helpful cues for future research in olfactory aesthetics. This book's focus on smell has limited its attention to the complex and open-ended ways in which olfaction interacts with other senses. While I have not directly engaged the recent intersensorial turn in sensory studies,[1] many of the examples studied here have

1. See, e.g., David Howes, "Multisensory Anthropology," *Annual Review of Anthropology* 48 (2019): 17–28, and Polina Dimova, *At the*

highlighted smell in relation to other senses: visual representation in Cariou and Stout's artworks, erotic memories of touch and taste in Tanaïs's memoir, temperature and atmospheric motion in Yi's exhibition, the haptics and taste of tentacular and vampiric interactions in Butler's novels. Centering smell destabilizes our sensorial norms, challenging us to relate differently to other senses—including the typically dominant senses of vision and hearing—through the transcorporeal, chemosensory, affective, visceral, and atmospheric experiences activated by olfaction.

Incommensurability highlights tensions between worldmaking projects, and reminds us that worldmaking is not inherently "good" or "bad." Instead, we must consider the tensions between different projects of reparative worldmaking—for example, between the desired and memory-suffused smellscapes of diasporic and Indigenous breathers, or between fragrance-free spaces that are accessible to people with environmental sensitivities and BIPOC microclimates oriented by a shared scent (for example, a conjure ritual, a durian feast, or an olfactory art installation). Attention to worldmaking may help clarify and communicate what is at stake in different and potentially incommensurable olfactory projects. This requires attention not only to what smell communicates but to its opacity—to the untranslatable, unruly qualities of olfactory responses. Smell's tendency to resist full disclosure—its subjective, contingent, indeterminate, and nonrepresentational qualities—is not something to be overcome or made transparent through sensitization, translation, or machine learning. Olfactory ethics should be framed not only as the expansion of olfactory tolerance and understanding but as the acknowledgment of limits to olfactory communion. These limits reframe atmospheric violence and repair not

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Crossroads of the Senses: The Synaesthetic Metaphor Across the Arts in European Modernism (Penn State University Press, 2024).

as occasions for expanded sympathy but as conditions from which we might work toward "solidarity in incommensurability."[2]

These issues are not only topics for further research but also reminders of the need for modesty in sensorial research. Studying smell as a way of making and remaking worlds conveys both the capaciousness of what smell can do and the limitations of our sensorial habits and methods. Collective, intersensorial, and incommensurable processes of olfactory worldmaking underscore how little we know about what smelling is or what futures might emerge from any olfactory encounter.

2. Michelle Huang and Carlos Alonso Nugent, "Solidarity in Incommensurability: Ethnic Studies and the Environmental Humanities," *American Quarterly* 77, no. 1 (March 2025): 133–44.

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