



Homesick

NICHOLAS SHAPIRO

Homesick



BUY

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Homesick

NICHOLAS SHAPIRO



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I've been having this Homesick feeling,
even though I am not sure what home I am sick for anymore. . . .

MONIQUE VERDIN, director of the Land Memory Bank
and Seed Exchange, former member of the United
Houma Nation Tribal Council, August 29, 2022

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PREFACE

Our No. 1 priority is housing, our No. 2 priority is housing,
and after that, at No. 3, we'd put housing.

GULF COAST DIRECTOR FOR FEMA

Formaldehyde is the only thing keeping me alive!

NEW ORLEANS BLUES SINGER

BENNY MAYGARDEN

We sat in folding chairs facing the street. A thick chain dangled from the live oak branch above us. My companion, Jeremy, looked up into the tangle of thick limbs and reminisced about when he had the energy to tinker with cars—using the metal rigging above to pull out engines. As he lowered his gaze from the tree's canopy back down to his trailer, jacked up on cinder blocks to our left, his stories of grease and metal ground to a halt. It had been years since he felt well. He, his wife, and their daughter, all Black, have been living in a twenty-one-foot-long travel trailer in the Mid-City neighborhood of New Orleans for the past five years.¹ Their trailer and 120,000 nearly identical trailers had been issued by the Federal Emergency Management Agency (FEMA) to those residents left without a habitable home after Hurricanes Katrina and Rita in 2005. Clearing phlegm from his throat, he recollected in his slightly high-pitched voice: “When we moved in, it was kinda, it was kinda . . . you could really *feel* the formaldehyde. We had to open the windows or we had to run the air-conditioning. . . . The formaldehyde would burn your eyes. It would burn your nostrils.” Although the chemical vapors became less intense or at least less noticeable over time, his family's upper airways were constantly inflamed. Bronchitis, chronic fatigue, nasal congestion, insomnia, and eye irritation all

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became features of their constitution. He laughed when I asked him how many over-the-counter medications he used in the hopes of feeling like he did before he moved in. “Aw, man. . . . Lemme see: Robitussin PM, sinus tablets, Theraflu™ Severe Cold and Cough, NyQuil™, Alaway™, Wal-itin . . . probably about seven or eight different types of medications. Some for the cough, some for the sinus and allergy, some for the, um, trying to get the mucus up, ya know?” Inside his trailer, the windowsills and door frames were lined with the small cardstock boxes of over-the-counter medications. Plastic pillboxes were stuffed between the cushions of the standard couch found in all such trailers. An asthma inhaler, which he said was prescribed last week, lay on top of the TV, and an empty blister pack of decongestant tablets sat atop discarded coupons in the trash can.

After the destruction of their rented suburban home, the family moved to the city and placed their trailer on a church friend’s vacant lot. Friends and family scattered across the region, and new neighbors were all living in FEMA trailers. They struck up friendships with their neighbors, many of whom also soon began to suffer from similar maladies. “We communicated a lot,” he recounted. “When they went to the doctor, they would tell me what’s going on with ’em and what medicines they picked up.” Together, old friends and new neighbors tried to sleuth out the source of their shared symptoms. With resources tight and their new mass-produced homes identical, information from an individual’s doctor visit might reveal something that would help everyone. Their uniform homes patterned their days and aligned their maladies, bringing their bodies into a near (dysfunctional) synchronicity. From the engineered wood that gave form to most surfaces in these trailers, toxic chemicals, notably formaldehyde, were continuously wriggling free of their bonds and into breathing space in a process known as “off-gassing.” This temperature-dependent process would increase as the sun rose in the morning, forcing inhabitants outside during the high off-gassing periods of the early afternoon. These converging homesicknesses—of chemical and domestic dispossession, of the sick markets that reap profits from racially patterned exposures, and of the struggle to move toward a home that supports life rather than draining it—all lie at the center of this book.

In time, the book will move well beyond the Gulf Coast and Katrina. But it starts here as an inroad to more general questions of how homes in America became sick and what can be done about it. Quiet caustic chemical exposures that strike in the privacy of one’s own home often cultivate profound somatic and social alienation. Restorative retreat is impossible in these toxic homes scattered across the country. It’s often unclear where one should look for

accountability, which other households might also be afflicted, and who could help them figure out the cause of their deteriorating body. With little training in environmental illnesses, clinicians often quickly dismiss individual cases as anything but chronic encounters with chemicals in the home. But after Katrina, when hundreds of thousands of survivors synchronously filed into nearly identical toxic homes, illnesses that manifest individually and often make people feel more isolated instead pulled into transitory alignment. The FEMA trailers and the sicknesses they spurred created a fleeting social dynamic across an entire region, garnering attention from across the world for otherwise commonplace domestic toxicity.

This minor way of being difunctionally in common was easily overlooked among the disorienting postdisaster landscape, the multiple struggles of rebuilding (cf. Adams 2013), and the big rhetoric of postdisaster community resilience (Solnit 2009: chapter 5; Flaherty 2010).² Yet, these emergency housing units and the toxic gas emanating from their building materials undergirded the everyday lives of a Gulf Coast in recovery, creating an anomalous moment for barely perceptible chemical exposures to be reckoned with. These toxic trailers produced international recognition of domestic chemical risks, multiple congressional hearings, and a historic, albeit regressive, shift in the way the building materials for all US homes are regulated.

This book will also be attentive to what this rare media and regulatory attention did not and perhaps cannot do. But before delving into how I spent more than a decade tracking these trailers as they were quasi-legally resold across the country, before drawing lines of connection from these boxy temporary homes to homes across the country, before detailing a cascade of concepts for reckoning with the experience of chronic exposure, articulating an array of small enfeebling encounters with chemicals into understandings of systematic harm, and putting multiple theories of change to the test, I want to set the scene more vividly.

In this preface, I document the clouds of formaldehyde exposures that emanated from the engineered woods of trailer walls, floors, doors, ceilings, and cabinetry, alongside a more general aura of horror that lingered in the city among flotsam and vacant houses. In the spatial shake-up of destruction and recovery, these mass-produced, bare-bones homes became a distributed city of their own, grafted atop a ravaged region.

IN THE EARLY HOURS of August 29, 2005, Hurricane Katrina churned across the extreme southeastern tip of Louisiana, an alluvial peninsula that could be

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thought of as a toe in a boot-shaped state. With wind speeds of more than 120 miles an hour and a diameter of four hundred miles, the hurricane veered east of New Orleans, making final landfall near the Louisiana-Mississippi border. Coastal Mississippi suffered near-total destruction. The storm carved its way north through Mississippi, spawning dozens of tornadoes and dissolving into heavy rain over the Midwest. Simultaneously, a surge of seawater—propelled by the hurricane as it made landfall in Mississippi—swept west, toward New Orleans. Two long concrete barriers, built to shield the city from flooding, funneled a broad swell of water into a concentrated torrent that tore through the mouth of a manufactured shipping channel and into the city's inner harbor and canals. Amplified in intensity by the very infrastructure designed to protect the city, the surge compromised New Orleans's levee system in over fifty locations. This paradox, of protection amplifying exposure, would continue to echo through the recovery and throughout this book. Eighty percent of New Orleans lay submerged. Less than a month after Katrina inundated the central Gulf Coast, Hurricane Rita careened up the Texas-Louisiana border.³ The storm upended smaller coastal communities and pushed the overwhelmed federal response even closer toward its breaking point.

After the storms, the walls of FEMA trailers were entrusted with the gargantuan task of reinstating the spatial syntax of the Gulf Coast, of separating ruins from residence, of carving out little pockets of order from the chaos of mass destruction.⁴ The disaster reordered life and landscape at a magnitude that is difficult to conceive.⁵ After more than 130 billion gallons of water poured into New Orleans, the city lay almost entirely vacant for months. Mold colonies burrowed deep into the frames of houses and cat's claw, a rapidly climbing vine with yellow spring flowers, began to net the city's blighted buildings. Long before they became a symbol of a protracted and painful recovery, FEMA trailers were cornerstones of the infrastructure of hope. They were gleaming white boxes that rode into the dismal postdisaster landscape on trains and behind trucks. For the 1.36 million diasporic Gulf Coast residents who applied to FEMA for individual assistance within a month of Katrina's landfall, the trailers were beacons of the possibility of reassembling a livable life.

The State Department of Economic Development established an Early Return Program and issued trailers to those workers deemed essential to the city's recovery. Through this program, a white architect in the relatively affluent Lake Terrace neighborhood, on the northern edge of City Park by Lake Pontchartrain, was granted early access to his property. Years later, seated around the conference table at his Central Business District office, he recalled his commute home from work, through a city dotted with powerless streetlamps. Every

night for months, he would slowly drive down pitch-black, rubble-lined streets with no signs of other living humans. Even as trailers began to be deployed en masse, four to six months after inundation, the tone of the city oscillated between eerie, foreign, and wild. “It feels like there are coyotes out there,” a middle-aged Black mother in the Hollygrove neighborhood recollected thinking early in the recovery, when strange and frightening noises wafted through the thin walls of her trailer at night. She was unable to work, overwrought by the anxiety and depression of living in an upended city. A Central City man shut out the unthinkable state of his city when he returned home every night, after long hours of maintenance work, to the remove of a donated Carnival Cruise ship moored in the Mississippi River. After he moved into his trailer—a much larger space in the thick of destruction—he took to drinking alone, late into the night.

These diminutive emergency housing units were deployed both to the drive-ways of homes in ruin (106,126 households) and, for those who possessed no real estate of their own (21,105 households), to federally run trailer parks. The recovery assistance of the trailer program provided more benefit to those who owned property—specifically property that had enough space for a trailer in the front, side, or back yard. Even with homeownership, those in predominantly Black neighborhoods with tight lot spacing were often not able to receive FEMA trailers on their property due to a lack of space.

For example, after Betty (whom you will meet in chapter 4) was flooded out of her Upper Ninth Ward home, she was granted a FEMA trailer but had no place to put it on her property. She spent a couple of months bouncing between the homes of family in Lake Charles and Baton Rouge. Like many families, and particularly Black families, she was commuting back and forth from New Orleans to Baton Rouge until one of her girlfriends gave her permission to set up a FEMA trailer on her property in Boutte, Louisiana—about thirty minutes outside of New Orleans. That arrangement knocked fifty minutes off her daily commute. Betty leapt at the chance. But within a few months of moving in, Betty came down with pneumonia for the first time in her fifty-year-long life. Eight months after moving in, Betty found ballooning lumps under her breast. Since then, she has endured the constant hurdles of surgeries and chemo regimens in the battle against persistent breast cancer.

People who had previously lived in public housing would often be assigned residency in far-flung FEMA trailer parks without access to transportation, child care, medical facilities, and social services. Housing policy experts quickly deplored the ghettoizing tendency of the group-site model that “epitomized everything that housing policy can do wrong for families” (Turner 2007: 1).⁶ To avoid living in trailers, middle- and upper-income owners of damaged homes



FIGURE P.1. FEMA trailer park under construction in Louisiana, late 2005. Photo by Marvin Nauman/FEMA.

entered the already depleted New Orleans rental market, increasing the cost of rent by 40 to 70 percent compared to pre-Katrina prices (Bernardi 2007). Priced out of renting, lower-income households found it increasingly difficult to locate permanent housing and languished in FEMA group sites (see fig. P.1).

Marquisha was thirteen when she moved into a trailer cluster just north of the Iberville housing projects that she used to call home. Her family was in the minority of public housing residents who were able to find temporary housing close to where they lived before the storm. Her most vivid memories from her trailer tenure involve sprinting and diving in the door of her temporary home to seek shelter from nearby gunfire on multiple occasions. While reassuring for Marquisha, the thinness of walls proved deadly for others. At 4:22 a.m. on a July morning in 2008, twenty-eight bullets passed through the aluminum siding and plywood wall of a Sheetrock contractor's FEMA trailer before striking his sleeping body. The predictable architecture of mass-produced FEMA trailers facilitated the ease of his murder.

Marquisha's sister, her brother, a cousin, her aunt, her mother, and her father all shared the small home with her. Mornings were particularly hectic. As the six of them prepared for work or school, they cycled into the miniature bathroom, through the hallway that was also the kitchen, and then crawled under the ironing board that perennially blocked the door. Upon returning home from school, Marquisha preferred to stay outside the trailer, as there was something unspeakably off-putting about its indoor atmosphere: "You know how you go

into somewhere and feel like it's kinda drowsy . . . your head would hurt? Every time I went up in there my head would hurt a lot." While living in the trailer, Marquisha was diagnosed with asthma and pneumonia. In that same year, her sister's eczema intensified—increasing in terms of both surface area and severity.

Long-standing social inequalities sculpted correlations between income and elevation above sea level in New Orleans, and they exposed those at the lower end of both spectrums to greater risks of flood-related displacement. As disasters often do, the flooding of the city tended to "magnify the social situations that existed before" (Miller and Rivera 2010: 180). By contrast, the impacted neighborhoods of Mississippi, which suffered a direct hit from the hurricane's winds and storm surge, were predominantly white. Wealthy neighborhoods on Mississippi's shoreline were as likely or, in a few instances, more likely to have sustained heavy damage than lower-income neighborhoods (Craemer 2010: 369). Using FEMA trailer-park populations as a proxy for all FEMA trailer residents, most FEMA trailer inhabitants in Louisiana were Black and in Mississippi most were white (Larrance et al. 2007). Across both states at the epicenter of hurricane recovery, lower-income residents disproportionately inhabited FEMA trailers and averaged a longer occupancy than their wealthy counterparts.

THE DAMAGE FROM Katrina and Rita spanned hundreds of miles of coastline. From Cambodian refugee fisherfolk in southwest Alabama to ranchers in east Texas, the white aluminum siding and gaunt interior of the trailers functioned as the common foundation on which the Gulf was rebuilt. These temporary housing units represent a truly unique moment in US housing history, as never before had so many people been thrust so abruptly into nearly identical living conditions.⁷

The FEMA trailers can be viewed as a neighborhood or city of their own—one that was distributed across the Gulf Coast, pivoting around New Orleans. An auxiliary city, it consisted of homogeneous architecture and more than 300,000 residents grafted atop a ravaged coastline. This scattered city was made in the hopes that it would be quickly disassembled. Such an infrastructural archipelago is perhaps best described as livable scaffolding, designed to assist the Gulf Coast in rearticulating discrete senses of place and community shaken apart by disaster. The entire project was stopgap medicine for a city with profound and thickening homesickness.

In unison, the cramped space of the trailers ignited arguments. Lovers broke up. Siblings fought. Thin walls allowed for the broadcasting of domestic

conflicts to neighbors. At the group sites, audio awareness of nearby disputes or domestic violence made stress feel almost contagious. Others, like Lizzie (whom you will meet in chapter 2), reveled in their first taste of privacy after months spent shifting between shelters and the homes of friends and relatives. Some found the compactness of the FEMA trailer to be emotionally reassuring after experiencing total loss—there was no empty domestic space to remind them of destroyed possessions. “It was all the space I could handle,” recounted one white woman who placed her trailer on her mother’s property on the West Bank after her Uptown apartment was rendered uninhabitable. A Cajun man who lived in one of the last towns at the mouth of the Mississippi recounted with an ambiguously sarcastic, mischievous, and sincerely upbeat grin, “It’s like living in a Swiss Army knife. What more could you ask for?” Almost everybody boasted of their ability to throw parties in their trailer, even if everyone usually ended up outside with “something of a headache.” At least one trailer served as a punk music venue. Life in its full dynamism went on in the trailers, even if it was predominated by dark notes for many.

As Gulf Coast residents began to settle into their emergency housing units, the trailers became a focal point. “We were all fascinated with each other’s trailer experiences. It was a big topic of conversation,” noted Miranda, a white resident of the Holy Cross neighborhood of the Lower Ninth Ward. The mundane reality of residents’ domestic space fueled much of their discussion. Miranda said, “It would just be stuff like ‘Where did you get your propane refilled?’ or ‘How does your heat work?’ or we would be jealous that somebody had the bump-out with extra room. And then definitely ones that would be more toxic, we would comment on them.”

While life in the trailers involved navigating new common spaces and domestic technologies, some aspects of their deployment were all too familiar. Out in the farthest corner of New Orleans East—a large suburban section of the city—is a neighborhood called Versailles. Residents of Versailles, a bastion for Vietnamese Catholics fleeing the war in the 1970s, assert that they are the most concentrated Vietnamese population outside of Vietnam (Chiang 2010). In late summer 2010, I met with Ray, who worked at a community development corporation associated with Mary Queen of Vietnam Church. Fisherfolk, unemployed by the BP oil-drilling disaster, milled about outside. In a back office, he began to tell me about life in his FEMA trailer park, which had been located about a half a mile away on a vacant lot across from the church and not far from where he had lived before the storm.

His was a relatively small displacement compared to the numerous FEMA trailer parks located an hour’s drive from inhabitants’ prestorm residences.

Sipping from his fluorescent red slushy between sentences, Ray nonchalantly described how racial patterns of segregation between Vietnamese, Black, and white blocks were reproduced in the miniature scale of the trailer park: “It was like the neighborhood just got smaller.” Elaborate community and personal gardens of several Vietnamese American residents were destroyed by the storm along with their homes. In the park, they quickly began cultivating the drive-ways allotted to them beside their trailers to grow Vietnamese vegetables and herbs that could not be found in local stores.

The fences and security of these trailer parks was often lamented by outside reporters trying to access the parks for stories (cf. Goodman 2006), but Ray was quite happy about the presence of security personnel and the mandatory sign-in sheets. He noted that the homogeneity of the trailers extended beyond their architecture to their ostensibly unique keys: “The keys that they made for the trailer, some of them were identical to other trailers, so you can break into other people’s trailers very easily.” Others also noted the key similarity problem and the common occurrence of propane theft that was reduced by the presence of security. Some 118,000 travel trailers built to FEMA specifications utilized three different types of lock; each type of lock had fifty-one, one hundred, or two hundred unique keys. In a FEMA trailer park of two hundred identical trailers, a single resident would likely be able to open at least one, and as many as four, other homes in their park without needing to force entry (Engber 2006). In the largest park of 1,600 trailers, upward of thirty-two households would share the same key.

Although group sites accounted for the vast minority of FEMA trailer placements (five times fewer than on private property), they were the almost-exclusive focus of post-Katrina media and social scientific research on these emergency housing units. The trailer density of the group sites lent themselves to door-knocking reporters and surveying academics, which made them an easier object of scrutiny than the larger constellation of FEMA trailers scattered across the region. These trailer parks also served to aggregate and, due to their often-remote locations, amplify the woes of displacement.

These trailer parks became increasingly bleak as time rolled on. By 2007, one in two Mississippi group-site residents did not possess health insurance, compared to the already high state average of 17 percent. Residents also carried a disproportionately high burden of chronic disease (Shehab et al. 2008). A 2006 survey of 229 individuals across Louisiana and Mississippi group sites found “shelter/privacy” to be the largest self-reported problem of FEMA trailer-park life (Larrance et al. 2007: 593). Shelter and privacy were the primary provisions of these temporary homes but also the primary shortcoming.

Residents were afflicted by compounding layers of homesickness and profound poverty was the norm.

By 2008, Black people were twice as likely as white people to still be living in their trailers (Bullard and Wright 2009: 30). The annual household income of the largest FEMA trailer park, Renaissance Village, averaged \$5,000. Over 40 percent of children under four years old in that park were found to have iron deficiency anemia: a rate twice that of children in New York City's homeless shelters and "by far the highest yet documented" in the United States (Children's Health Fund 2008: 12). The study also found that 42 percent of children who visited their mobile clinic were diagnosed with allergic rhinitis and/or upper respiratory infections, and 24 percent had a cluster of upper respiratory, allergic, and dermatological diagnoses (13–14). Half of the respondents to a 2006 survey of FEMA trailer parks met the criteria for major depression. Suicide attempt rates were seventy-eight times the US baseline levels (Larrance et al. 2007).

The desperation was most acute in remote FEMA trailer parks, which also had a reputation for high rates of drug usage. Visitors to the Scenic Trails FEMA trailer park in rural Mississippi in 2007 would find trailer windows blacked out with tin foil, accusations that an unknown resident was executing others' pets with antifreeze, and an alarming number of people expressing suicidal ideation (Spiegel 2007). Located thirty minutes from the nearest town, the trailer park's inhabitants could be seen walking along the highway to work. Facing steep travel costs and pulled out of community with free family babysitting, staying unemployed was an even more reasonable financial decision for some. Shared infrastructure and illness did not always and everywhere reorient inhabitants toward collectivity. Indeed, the residents of Scenic Trails, and many other remote parks, became depressed and self-isolating in unison. Other FEMA trailer inhabitants became too sick to think about anyone but themselves. Some, of course, felt no negative impact at all.

One afternoon in August 2007, a year and a half into his trailer residency, a stranger appeared at Ray's door. She said she would like to test his trailer for formaldehyde. He wasn't sure what that meant, but he was happy to "let her do her thing." Weeks later, he was told that he had a reading of 323 parts per billion (ppb). This reading was more than three times higher than the US Environmental Protection Agency (EPA) recommended for the maximum air level for formaldehyde indoors, 100 ppb, a level that is itself more than twelve times higher than the Agency for Toxic Substances and Disease Registry (ATSDR) threshold for possible negative health consequences, 8 ppb. Having now spent years testing homes with high formaldehyde, the prospect of spend-

ing even ten minutes in an atmosphere that thick makes me queasy. “I didn’t think it was a big deal,” Ray shrugged and took a big slurp from his drink. “I didn’t feel no side effects from it, ya know? I’ve always been tired.” Ray thought and still thinks nothing of it. Feeling no symptoms of his own, Ray never sought out more than a cursory engagement with other FEMA trailer residents.

As time went on, most residents who had returned were able to, at least partially, buck the psychic pull of sorrow, despair, and depression. The region rebuilt slowly, and by July 2007 the majority of trailer residents had moved into permanent housing. Over time, staying in a trailer became an indicator of who faced barriers to getting back on track: largely the elderly, poor, or disabled.

When I last saw the man whom I mentioned at the beginning of this preface, Jeremy, in May 2011, he sat under the live oak tree. Two letters lay on the grass in front of him, pinned beneath his sneakers. One was from FEMA, fining him \$800 for not having found permanent housing as the sixth anniversary of the hurricane approached. The other was from the city, fining him nearly \$100 a day as they reinstated a pre-Katrina city ordinance banning the placement of trailers within the Orleans Parish. At this point, his family was living in one of only a handful of trailers left in the city. New Orleans was trying to move on. The last emergency hiatuses of established law were being disassembled.⁸ Press coverage of the forced exodus of the last remaining FEMA trailer inhabitants was polarized. Some chided those still in trailers, labeling them lazy free-loaders past due for the boot. Others admonished the move as an antipoverty policy. All this man knew was that he didn’t know where he was going to go. “It is severe. It is *severe*. It is **severe**,” he repeated with increased intensity as the reality of the situation seared him in real time. After his words ran out, he continued shaking his head, anxiously running his tongue across his teeth and under his lips. The gold caps on his incisors were wearing away, revealing clean white ellipses of bone.

Before the storm, Jeremy was a pastor, with a congregation of 250. He used to rent a house in a relatively affluent suburb, and he, his wife, and their daughter were in fine health. The rubble that lay a few yards away from us, in the adjacent lot, was all that was left of his church. He and remaining churchgoers had put in new windows and a new roof, but they could not get the building back up to code after the storm. From the small window of his trailer, he watched the city’s bulldozers topple his boxy, two-story church. “I almost feel like Job,” he said, still seated and pawing at the grass with his clean, outdated Nikes. Much of his congregation never returned from evacuation. Any tithe collected from those who had returned went to buying school materials for the

neighborhood children or keeping the lights on for elderly church members. Fire ants had crawled into my shoes and bit my toes while we talked. I let them burn for a second before walking home to get the number of a pro bono lawyer who could attempt to legally delay a forced departure. As we agreed, I texted him the name and number of a willing attorney. A month later he texted back, “They forced us out.”

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INTRODUCTION

Homesick, Otherwise

As the second half of the twentieth century progressed, the air within US homes became increasingly infused with a range of toxic substances. Corrosive, enfeebling, and even suffocating atmospheres became a fixture of the ordinary chemical ecologies of American housing through rapid and large-scale shifts in building practices that took place beneath the surface of a home's architecture.

The chemical reactions that formed the first plastic—phenol and formaldehyde in Bakelite—were no longer reserved for items like jewelry, billiard balls, and the field telephones used in trench warfare but began to clad houses as the adhesive that held together plywood and particleboard. The war effort had accelerated the development of these engineered woods that utilized petrochemical binding agents, replacing animal blood and plant-based glues. These standardized sheets of wood-plastic mixtures resisted decay, cut and deskilled installation labor, and reduced the number of nails used in average home construction by half. From the early 1950s to the 1990s, the average square footage of plywood used in home construction quintupled. The use of particleboard, another engineered wood product, increased by 3,000 percent (Ore 2011: 270, 272).

Urea-formaldehyde resins progressively took hold in interior applications, spanning plywood, particleboard, chipboard, Luan, and a whole host of other engineered woods, because they were less expensive than phenol resins. Phenol-bound boards were reserved for exterior sheathing, where weather conditions demanded their ability to withstand moisture. But cheaper urea-formaldehyde chemical bonds are more unstable, and, importantly for our story, they continuously and quietly sublimate formaldehyde into the nation's most intimate breathing spaces. Older toxic domestic building materials would need to be

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damaged—peeling lead paint or an errant saw blade cutting into asbestos adhesives—to enter human bodies. Formaldehyde needs no such rare invitation to spring into the air. It constantly and invisibly wafts from solid form into inhabitants' lungs.

As more toxic chemicals sloughed off building materials into interior air, the rise of modern climate-control systems worked to seal those emissions inside the home (cf. Barber 2023). The 1970s oil crisis then accelerated this trend by giving rise to federal policy and state building codes that aimed to more tightly partition homes from the outdoor environment in the name of energy conservation (Jacobsen and Kotchen 2010; Wolfson 2013). By 1995, one in four homes had poor ventilation (Miller and McMullin 2014).

Today, an invisible mist of microemissions cascades in slow motion from the adhesives in your hardboard kitchen cabinets; wafts up from your carpet, laminated flooring, or particleboard subfloor; and swirls in unseen vortices around your passing ankles. Without a cracked window, an opened door, or other forms of air exchange, these chemicals accrue, molecule by molecule, within the building envelope of your home. Nine out of every ten breaths in your life will take place in enclosed spaces where the air is suffused with chemicals that are off-gassing from construction materials and the myriad commodities that fill our daily lives. Indeed, the average levels of formaldehyde found in conventional American homes are two to three times higher than the level the EPA says can decrease pulmonary function and aggravate asthma and allergies (US Department of Housing and Urban Development 2024; US Environmental Protection Agency 2024).

The dual dynamics of more chemicals emanating from building materials and more tightly sealed homes bottling up that toxic brew have yielded indoor toxicant levels often many times higher than corresponding outdoor air (US Environmental Protection Agency 1987; Khoder et al. 2000). This is where America lives: indoors, where the errant molecules of the built environment's extended exhale are met by the inhales of life. Here, within these heightened spaces of exposure, North Americans, over the course of a day, gulp some eighteen pounds of industrially textured air. Respiration is the most prominent mode of exchange between human bodies and the rest of the environment (far greater than eating or drinking), and it is a primary site for absorbing the residues of engineered materials.

US residents are very literally homesick within their own homes, and chemical exposure is only part of the story. This book breaks this homesickness down into three forms: toxic homes (the subject), the sick concepts and markets of racial capitalism (the condition), and a homesickness in search of

more just futures (the method)—a discontent with and longing for something better than now.

Toxic Homes

Ask the question of how shelter became exposure, of how the average American home became an epicenter of chemical hazard, and you will find an answer a mile below the earth's surface.

Formaldehyde, the most common and most toxicologically understood indoor-air pollutant (Salthammer et al. 2010: 2537), is made from methane, also known as natural gas. Methane is an inexpensive and relatively abundant raw material for producing a wide variety of chemicals, also known as a feedstock. The scale, profitability, and low cost of natural gas is primarily driven by its widespread use in generating electricity and heating homes. Further financing its low cost, natural gas is sometimes considered a “freebie,” a fuel extracted by convenience since it perches atop more valuable oil deposits. Chemical exposures within the home, in other words, are driven by a world that runs on hydrocarbons. Vast societal investments in fossil fuel consumption and extraction subsidize the affordability of the toxic home and complicate the economics of building differently. The planetary homesickness of climate change and the individual gassing of people in their homes are not different issues.

Beyond being derived from a greenhouse gas, formaldehyde—that binding agent that holds together contemporary homes—is an irritant, an allergen, a neurotoxin, and a known human carcinogen. The chemical causes more cancer in humans than any other known hazardous air pollutant, by far (US Environmental Protection Agency 2025). Its presence in mammalian bodies can destroy enzymes that maintain bronchial tone, strip axons of their sheathing, dysregulate gene expression, break chromosomes, misfold proteins, exacerbate asthma, degrade semen quality, and impair cognition and learning (NTP 2011; H. Wang et al. 2015). Neurochemists increasingly suspect that this nearly omnipresent chemical has a role in neurodegenerative conditions such as Alzheimer's disease, accelerating the aging of our minds as it gives form to our homes (Jing et al. 2013).

But this story is more complicated. Formaldehyde is essential not only for the building techniques propagated by industrial capitalism, but also for life itself. Formaldehyde predates carbon-based life forms on earth and likely played an important role in the origins of life in primeval oceans. In the human body, the chemical is an indispensable metabolic intermediary in the biosynthesis of two of the four building blocks of DNA, some amino acids, and molecules that

play a role in blood pressure control and hormone signaling (NTP 2011). At any given moment your blood carries detectable levels of formaldehyde. Your brain likely hosts two to four times the level present in your blood (Tulpule and Dringen 2013). Chemical industry advocacy groups are fond of these facts and assert that the average human body essentially takes a shot (1.5 ounces) of self-produced formaldehyde every day (American Chemistry Council 2024). This internal dose is also always causing DNA damage (Leng et al. 2019). The role of formaldehyde cannot be labeled as strictly physiological or pathological.

Formaldehyde protects home construction materials from insects, bacteria, and fungal decay. It reduces the costs of construction while also hastening the decay of human inhabitants. The irony is that this chemical attacks human tissues but also fends off postmortem decomposition, as gallons of it are injected into the veins of American corpses as an embalming fluid. The compound chemically tugs people toward death and then defends their inanimate bodies against biological disintegration. Take a step back and the multiple, oppositional roles that formaldehyde occupies are also those of the engineered home: an agent of preservation that is also an agent of decay, a shelter that is the seat of exposure.

Thinking more broadly than this single chemical, domestic air—meaning the air within a home—as a whole is unregulated in the United States. Global maps of domestic air-quality regulations gray out the country or lay a large question mark over it. The only federal domestic air-quality regulation in US history that I’m aware of was announced in April 2008, only to be quietly rescinded some three years later. It only applied to one specific kind of home—emergency housing units made by the Federal Emergency Management Agency (FEMA)—and only applied to one kind of chemical: formaldehyde.

Something happened in the FEMA trailers that broke with how regulators understood chronic chemical exposures in the home. The more than 120,000 government-issued temporary homes that provided refuge to Gulf Coast residents allowed these invisible chemical hazards to be uniquely concentrated, documented, and newsworthy. Indeed, the FEMA trailers arguably constituted the largest formaldehyde exposure in the history of our species, an exposure event that took place in the media maelstrom that followed the costliest natural disaster in US history. The trailers and their toxic air garnered congressional hearings and even drove the first set of revisions to the backbone federal toxics legislation, the Toxic Substances Control Act, focusing on formaldehyde.

But the FEMA trailer is not an aberrant shelter, a mere upshot of postdisaster disarray. Rather, it is an indicator of the commodity pathways, dream-worlds, and legal structures of the home that, today, can be described by no

word other than conventional. These trailers are inroads to all of our homes. For this reason both formaldehyde and the FEMA trailers anchor the subject matter of this book as it attempts to grapple with much more widespread and uneventful domestic health hazards.¹

Homesick for Otherwise Futures

I approach toxic homes with a method that is homesick for a future that does not look like today. By that, I mean this book is committed to advancing, documenting, and theorizing horizons of change. An “otherwise” is shorthand for the destination of various change-making actions. The method of this book involves learning from chemically exposed people about how they change the microconditions of life to enhance their survivability. It also involves throwing my weight—always with others—against the larger forces that drive mass corrosive gassing. This book also imagines how to destabilize the global hydrocarbon extraction system that underwrites a world built by formaldehyde. This form of homesickness is not fueled by a romantic nostalgia for a pristine and prior home. Instead, it is a homesickness for something one might feel is missing, but has yet to experience—a simple conviction that the state of things is not right.

Hungry for minuscule and massive destabilization of the violent status quo, the book documents my collaborative work in the service of making this future: poring over evidence in toxic tort litigation as a law clerk, designing open-source and low-cost tools for impacted communities to monitor and remediate their domestic exposures, creating air-monitoring protocols with communities living in the fracking fields, building remediation systems, producing a mini-documentary, and collaborating with artists and engineers to envision how needs and desires can be met without advancing solutions that shape-shift or spatially redistribute the harms that are tied up in the petrochemical home. I stress the collaborative nature of all this work because a commitment to co-learning—muddling together rather than sitting in analytical judgment—is foundational to all of these projects.

A homesick longing for a different world, a more just world, drove a decade of work that was focused not just on narrating the plight I encountered or making sense of what I saw through theory, but also on putting to the test dominant ideas of how to improve the conditions of life. As a result, a central focus of the book is the actions that people afflicted by environmental injustices (and their allies) are told will better their situation. I’ll refer to the logics behind common answers to the question “What can be done?” as theorizing change:

reducing harm, documenting harm, changing systems, and so on. Theories of change are often tacit, guiding how groups come together to improve their environments or fragment as they disagree what kinds of interventions are best suited to any particular issue.

Grounding my method in theorizing change roots the book in accountability to the situations and people with whom I became involved in this research. At heart, theorizing change represents the desire to have a plan to interrupt or eradicate harm.² Theory in general, on the other hand, is primarily accountable to explanation and colleagues within scholarly discourse. Of course, theory is crucial to and informs theorizing change. But, in the case of this book, simply making sense of what I observed through theory left me with the feeling that vital work was left undone. This undone labor was jointly ethical—how can my research be put to work for the people who shared their stories with me—and analytical—what do different interventions reveal about power and the resilience of harmful systems, concepts, or practices?

All research that is not content with the status quo is at least tacitly theorizing change (see chapter 5; Tuck 2009). Pulling these unspoken theories into the analytical limelight allows me to interrogate them and make my inquiry more robust. Extending ethnographic analysis to my own humble attempts at bending the future away from harm helps me foster accountability with a discipline, anthropology, where spurring meaningful and substantive change is not the essential question.³

In this book I attempt to hold, in a sometimes quarrelsome and often wary alliance, multiple forms of stopgap, reformist, and radical change projects aimed at ameliorating or preempting homesickness. Just as those exposed to toxicants today cannot be held hostage to quasi-plausible massive systems changes of an unknown tomorrow, we are consigning the world to perpetual toxicity, and those in struggle to perpetual labor, if prevailing technocratic triage continues to dominate how environmental improvement is imagined.⁴

These methods are a far cry from simply reaffirming “a cosmic faith” (Haraway 2016: 3) in the ability of technology to solve social problems. I am also not interested in simply pointing to the many instances of tragedy or farce that are strewn across the paths to environmental justice. Each way of theorizing change has a logic—the asserted mechanism of transformation—and a temporality—the timeline for it to take hold. This book textures the multiple, and often mutually exclusive, logics and temporalities of intervention.

Answering in resounding affirmation to María Puig de la Bellacasa’s question “Couldn’t holding these apparently contradictory positions together open unexpected avenues to think environmentalism?” (2017: 128), I advance a

syncretic method rife with productive frictions, one that makes strides toward a less toxic world by coordinating across multiple, self-enclosing timescales and logics. This method is not a hopeful metaphor, a conjectural agenda, or a feel-good holism but a collection of practices, abounding in internal tensions, that I have been co-learning in constant relation with my theoretical and empirical work and with dozens of collaborators.

OF ALL OF THE HUNDREDS of moments that set this method into motion, one in particular pushed me to reckon with an assumption common to almost all of the conventional theories of environmental change. As I was following formaldehyde up the production pipeline to the extraction of natural gas, from which it is derived, I found myself seated next to two white residents in a rural community that had been gripped by intensive fracking for six years. Formaldehyde levels of 30 to 240 times background levels had been found wafting through the air of their formerly agricultural community (Macey et al. 2014).

I pulled over a chair to the kitchen table as Frank popped three frozen burritos into the toaster oven. Frank often referred to his ten-acre plot as “the doughnut hole.” He was the only one in the area who hadn’t leased their mineral rights for natural gas exploitation. An active well pad stood just on the other side of a small hill in his backyard. Frank’s antifracking activism is legendary. He spent his blue-collar life savings buying expensive environmental monitoring equipment and driving the country in an old RV, helping communities document their exposures from oil, gas, and petrochemical infrastructure.

Rachel, who lived about twenty minutes away, sat on the other side of the table. She was the outspoken leader of the local group of residents concerned about the impacts of fracking. As we spoke about the group’s evolving strategy she leaned in and explained, “There’s been a lot of lengthy articles about [our local environmental justice community group].” She spoke with a surprising air of discontent. I had assumed that sustained media attention would be valuable leverage for their mission to foster accountability in their industrial neighbors. Reading the confusion on my face, she elaborated, “It was good but, um . . . yeah. We are getting slammed by people all over the country that don’t want fracking to happen because. . . .”

After a pause, Frank attempted to finish the thought that had evaporated from Rachel’s mouth. “Their way of thinking is that if we make it less bad. . . .” Frank too seemed incapable of completing their shared impression of fellow environmentalists with whom they’d struggled arm in arm for years. One of Frank’s hands alternated between ruffling and then smoothing his graying

beard as he looked past me. The tick of the toaster oven made the passage of time audible. Rachel then succinctly distilled their reluctant view: “They want it to get as bad as possible here.”

Rachel, Frank, and their local allies had already lost the local battle to prevent fracking for natural gas. After early spectacular contamination events (like drinking water coming out of the tap like a flamethrower) failed to halt the rapid industrialization of their rural county, they pivoted their organizing efforts. Only denouncing what had already arrived felt futile, so they sought survival by brokering an often deeply technical dialogue with industry about mitigating air-quality impacts. In other words, when it became clear fracking could no longer be prevented or stopped, they shifted to trying to make it more conducive to staying alive. In one of my first meetings with them, they were working on introducing a company that makes high-efficiency catalytic converters (a machine that scrubs pollution from emissions) to the biggest oil and gas company that was continuously releasing a slew of toxics into their region.

Parts of this bucolic community had worse air quality than London, a city of over eight million people where I was living at the time. A constellation of polluting infrastructure owned by different companies netted the rural landscape. Concerned residents like Frank and Rachel wanted to attribute the clouds of pollution that would accumulate in different valleys to specific companies in order to trigger a regulatory violation. But this was both scientifically arduous and required vast amounts of data that was well beyond the motley group’s resources to collect. Governmental oversight felt as useful as catching emissions in butterfly nets. In the wake of a failure of regulation, the work of persisting took the shape of liaising between corporate entities in the hope that these profit-based industries would implement safety measures in excess of the letter of the law. The group continued to document harm in the hope that it would facilitate their mitigation negotiations.

As a result, the wider antifracking community accused them of flipping. “We’ve been the poster kids for them,” Rachel almost wistfully remembered. Indeed, many of the most iconic fracking-related contamination events had befallen their corner of the Marcellus shale field (explosions, corrosions, and a slew of reported human and animal health issues). In the middle of our work together, Rachel’s well, the source of drinking water at the home where she cared for an elderly father, was contaminated by fracking chemicals. Documentation of these happenings was valuable currency for the larger antifracking movement; mitigating these harms could be seen as making the process more palatable, facilitating its entrenchment and expansion.

As we talked, headlights from an industry truck cut through Frank's forested backyard. It was turning off the paved highway and down a dirt road to a nearby well pad that hosted around-the-clock activity. He and his late wife, who had recently passed from cancer, built their house in its entirety. Its only embellishments are the four tiny dovetail joints that Frank, a retired cabinet-maker, had chiseled into every floorboard—holding them together with excessive unity. Frank stood up and moved silently over the creakless floor toward the fridge. Grabbing beers for all of us, he concluded decisively, "If we don't die, it's bad for them."

What was nearly unspeakable at Frank's kitchen table—that the sacrifice zones integral to maintaining industrial production can mirror sacrifice zones for environmentalists seeking evidence of harm to oppose those very same industries—is just one of the tensions knotted into that somber exchange. One could read the strain of these circumstances as the double binds—situations of irreconcilable choices—of contestation: as struggles between the needs of hyperlocal survival and a more generalized future or between reform and total refusal.⁵ But what strikes me as more important than the friction of divergent logics of change is what they have in common.

Those hoping to abolish fracking and those whose lungs and drinking water are marked by having lost the local struggle to keep fracking out have a *shared* dream that documenting harms will lead to the realization of their divergent goals. The reason I was seated at that table was to monitor the air impacts of nearby fracking infrastructure through an imminent multiyear community air-quality monitoring project with Frank, Rachel, and their neighbors.

Whether by attempting to accumulate air-quality data that would force local compressor stations (essentially small refineries that are part of natural gas transportation infrastructure) to reduce air emissions, or by documenting human illnesses in pursuit of stopping and reversing fracking as a practice, both strategies see evidence of risk or harm as key to change. More than this, the groups implementing these strategies are tirelessly laboring to accrue *enough* evidence. The idea is to rupture "the barrier of public indifference [. . . by] marshalling all the facts" (Rachel Carson quoted in Brooks 1989: 258), by making the evidence substantive enough, eventful enough.

Enough. An imagined threshold of eventfulness leads to change. But can events make good on their promises of change? Or does working to collect perpetually almost-sufficient data partially function as busy work, ultimately guaranteeing that things remain the same?

The diverse array of conventional avenues for detoxification largely buy into, fall prey to, or even simply acquiesce to what might be called the eventfulness

myth. The eventfulness myth is the promissory note we write to ourselves and each other when we imagine that we can document fastidiously *enough* or narrate charismatically *enough* that we can extinguish a sufficient amount of the environmental problems of late industrial capitalism. Other times, we anxiously anticipate things to eventually go wrong *enough*—for factory explosions to be destructive enough, or, in related social justice endeavors, for markets to crash deeply enough, or wrongheaded policies to fail egregiously enough.⁶ *Enough is enough* as a rallying cry at protests is sentimentally true, but empirically it may be more the exception than the rule.

In the case of toxics, the lack of eventful events means that slow, agentless exposures, with their ongoing subclinical illnesses, are less likely to inspire public and scientific concern. Such a logic, the very logic of the event, also cultivates an imagination of a threshold that stimulates change once attained, one that turns out to be an ever-receding horizon.⁷ The specter of the event defers substantive change to the catastrophes and representational technologies of a tomorrow that never comes. As Joseph Masco has articulated from a slightly different vantage, the idea of a “crisis” built on an accumulation of eventfulness “has become a counterrevolutionary force in the twenty-first century, a call to confront collective endangerment that instead increasingly articulates the very limits of the political” (2017: 567).

As the writing of Saidiya Hartman has made clear, what can feel like powerfully bearing witness to the evidence itself—the stories, images, or statistics—can quickly slide into an immured spectatorship of “endless recitations of the ghastly and terrible” (1997: 3). The empathy fuel of change ignited by an event, crisis, or “the exposure of the violated body” is particularly ineffective, or at least fickle, in struggles to reckon with the violence of structural discrimination (2–3). Organizer and public intellectual Mariame Kaba has labeled attempts to leverage extraordinary violent events in service of substantive changes to the everyday as “a fool’s errand.” This approach often simply does not work. In the case of anti-Black state violence, particularly, “it leaves Black people in the position of having to ratchet up the excess to get anyone to care or pay attention” (Kaba 2021: 85).

Far from spurning the meticulous fact-finding toils of others, the bulk of both this book and my own practices falls within the frame of the standard, yet ever-shifting and slippery, theories of change. Coming to terms with the likelihood that there will never be enough data, that many science-for-justice endeavors are running on a “data treadmill” (Shapiro et al. 2017), producing ever more data toward an intrinsically unreachable destination, was utterly bleak. Mourning the dramatically constrained horizons of a familiar hope initially led

me to an extremely cramped headspace. The possibilities this critique opened up were so alien to my corner of the toxics activism world that they approached logical heresy. But soon, after a melancholy year I spent studying, experimenting, accepting serendipitous invitations, and soliciting guidance, the claustrophobic outlook I had cultivated in myself though this critique of event and evidence opened out onto an overwhelming expanse of alter-political possibility.

In their work, historian-organizer M Murphy (2004, 2006, 2007, 2008a, 2008b, 2010, 2013, 2016a, 2016b, 2017) has documented how technoscience dilates our ability to make claims about systemic and unequal environmental injuries at the same time as it constricts how we can authoritatively know our environment and how we imagine chemical relations starting or stopping. This paradox leads them to simultaneously search for accountability within flawed systems of environmental science and regulation while also attempting to articulate the harms of late industrial worlds beyond the limited way that industrial chemistry knows its own problems. In other words, Murphy works both “with and against technoscience” (2017: 495) in their attempts to bend asymmetrically benefiting and burdening chemical infrastructures toward justice and equity.

In this book, I hope to detail how the axis of conspiring and condemning has more degrees of freedom, more political orientations, that cannot be reconciled with the adversarial logics of antipolitics.⁸ Murphy’s complex political posture opens the possibility of alter-political action. More succinctly, not only “with and against” but “with and against and of and beyond” this world. “Of and beyond” is an orientation undeniably anchored in material realities but is oriented toward an otherwise and not only toward one that disavows in antipolitical action.

Apprehending how environmental reformism and even righteous means of contestation often lead to entrenchment rather than resolution pushes me, not to spurn survival work like that of Frank and Rachel (and much of this book), but to supplement ongoing work aimed at either mollifying or dismantling our engineered world, bolt by bolt. Highlighting how the hegemony of adversarial, event-based modes of change uphold ostensibly compulsory harms enables other visions of change to begin to appear reasonable. The liberatory value of enticing abandonment of the status quo, rather than exclusively locking horns with it, is increasingly clear. From this perspective, it’s easier to view the multiple qualities of direct contestation as a necessity at some timescales and as attritional and conservative at others if it’s not allied with alternatives. What falls out of reason in thinking with and against and of and beyond the current world

is the monolithic dominance of the logic that “necessary” harms are indeed necessary, only to be forever mitigated and never upended (Weizman 2011).

My goals with all of this big talk are simple. To better understand what the conventional tools for detoxification—litigation, legislation, remediation, and enumeration—can and can’t do and to ask how alter-political action can be a vital addition to the toolbox. We arrive at these broad ends with cross-cutting applicability by way of the specifics of the toxic homes of the FEMA trailers.

Finding Home Under Racial Capitalism

As the city and the federal government were forcefully closing trailer doors as federal property for those displaced by hurricanes with fines for remaining low-income residents in 2010, trailer doors were reopening all across the United States as private property for those displaced by the ordinary functioning of capitalism. Mediated by rural speculative entrepreneurs and the open market, FEMA trailers were becoming new homes across the country.

By that point, returned or unused trailers had stood empty for years. A November 2007 court order had forbidden the US government from selling used FEMA trailers until January 1, 2010, retaining them as possible evidence in a lawsuit related to formaldehyde exposure. After the moratorium ended, the federal government began reselling some 150,000 of these now-infamous trailers at public auctions and at fire-sale prices.⁹ The General Services Administration (GSA) was tasked with offloading these trailers in massive auctions. They attempted to sever the health liability of selling potentially contaminated units by adhering stickers on the windows of the FEMA trailers that stated, in red lettering, “NOT TO BE USED AS HOUSING.” Many of the units I tracked would indeed be used and resold as housing. Much more often than not these warnings were removed.

The vast majority of the people I talked to who lived in resold FEMA trailers across the country were low-income and white. The boxy, 250-square-foot homes link the organized neglect of Black people in New Orleans after Katrina to the mass toxic exposure of low-income white people. The disjointedly shared space of the FEMA trailer connects a singular urban horror, which some think of as vital fuel for what would become the Black Lives Matter movement (Bouie 2015), with white rural or peri-urban spaces that many in the United States assume to be bastions of racial animus. Simultaneously, at least a thousand FEMA mobile homes were donated to tribal governments hard struck for housing (FEMA 2007). The story of these trailers is a story of racial capitalism. A story of anti-Blackness, settler colonialism, and a white underclass that is

not claimed by whiteness. A story about the distribution of an acute exposure within a form of capitalism that tends “not to homogenize but to differentiate” (Robinson 2000: 26) and to extract value from those social differences. A story of temporary and long-simmering capital and housing crises, of disaster capitalism melting away to reveal more continuous contours of capitalism and the state.

Racial capitalism, which is the idea that racism precedes capitalism and persists as a structuring logic, is the condition of possibility for this distribution of toxic living. In *Black Marxism: The Making of the Black Radical Tradition*, Cedric Robinson argues that racial capitalism emerges not from early colonial encounters between Europeans and non-Europeans but from intra-European dynamics. Economic exploitation and hostility toward, for instance, the Slavs and later the Irish were justified along racial/nationalistic lines. This racial differentiation was then baked into capitalism, forming “its epistemology, its ordering principle, its organizing structure, its moral authority, its economy of justice, commerce, power” (2000: xxxi). These ideas and practices were later extended to and intensified upon other racialized communities across the globe. Value derived from racial difference was baked into the very core of the US economy in Black chattel slavery and the quest of Indigenous elimination and continues to shape landscape, livelihoods, and longevity (Pasternak 2020; Estes et. al 2021; Jenkins and Leroy 2021). Geographer Laura Pulido (2016) argues that a lack of reckoning with racial capitalism is a key reason that environmental injustices have not diminished, and may have worsened, in the forty years since the inception of the environmental justice movement. I agree.

Following an environmental hazard from a predominantly Black community to a predominantly white population is not a well-worn path, so let me clarify the group of white people who inhabit these trailers. White people living in mobile homes are often referred to as “trailer trash,” a term closely allied with the larger umbrella term of “white trash.” In the late twentieth century, living in manufactured housing developed a stigma. The number of postagrarian rural communities increased steeply during this period (Castle 1995), decoupling rural living from the institution of farming. This shifted the rubrics of rural social status from an emphasis on family reputation to that of residence location and conspicuous consumption. At this time the mobile-home park became a significant rural community form and non-trailer-dwelling whites began wielding terms like “trailer trash” to erect a racial firewall against the other whites who resided in these marginal homes. “White trash” became “feared and despised because of their economic and physical proximity

to minorities” (Kusenbach 2009: 402).¹⁰ In the latter half of the twentieth century, the trailer became symbolic of poor whites, whom generations of eugenicists had described as shiftless, bad breeders, living hand-to-mouth, and unwilling to work in the first half of the century (Isenberg 2016: 315), all derogatory labels that eugenicists and public authorities aimed more squarely at Black and Indigenous populations.

This is not to say that white people spurned by whiteness can’t also be anti-Black. I remember talking one day with an older white man in a trailer park just east of New Orleans. He spoke to me through a gap in the slats of his trailer window blinds, held open by his fingers. He denied formaldehyde’s existence (“That [formaldehyde issue] is just a bunch of nonsense made up by n****rs to get a buck”) even while admitting that the formaldehyde, which he claimed he could smell, was helpful to him by keeping vermin out. He also refused to believe that his compounding health issues had any relation to his home. Moments like these, which closely resemble the phenomenon that Jonathan Metz (2020) describes as “dying of whiteness,” in which white people and their racism are on the hook for their ill health, are a minor current in this story. Rather, the dominant current in the trailer diaspora is down-and-out white folks being subject to modes of structural marginalization intended for and prototyped on Black and Indigenous people (cf. Pulido 2016: 2). Racial capitalism does not care about white people, only whiteness, yielding opportunities for differentiation and value extraction.

The majority of mobile-home purchases are financed via personal property loans, similar to those used for cars. These loans provide greater returns for lenders, as they bear higher interest rates than mortgages and come with fewer consumer protections. These loans also carry fewer up-front costs. As time goes on, this yawning gap between real estate and “wheel estate” expands as mobile homes tend to decrease in value—the opposite of conventional homes.¹¹

Our climatically destabilizing planet will only compound these problems. The walls of mobile homes have limited integrity (with limited insulation and poor seals), making the units difficult to heat and cool and saddling residents with exorbitant energy costs. Mobile-home residents are twice as likely to bear a high energy burden than residents of a single-family detached home (Berry et al. 2018). A just energy transition is further away for mobile-home residents than for any other US housing type, with a net return on energy efficiency investment twenty-four times lower than in single-family homes (Tonn et al. 2018). These costs are not just financial. Mobile homes are increasingly placed in the hottest census tracts and on floodplains (Lee and Jung 2014). In Arizona’s sprawling and sweltering Maricopa County, for example, 28 percent of

indoor heat-associated deaths occur in mobile homes, despite only amounting to 5 percent of the housing stock (Kear et al. 2020).

The persistence of housing insecurity, which often makes these homes the best option for those priced out of the conventional housing market, makes mobile-home parks lucrative investments for global capital. For this reason, private equity firms, ranging from Blackstone (\$457 billion in assets) and Apollo Global (\$270 billion) to the sovereign wealth fund of the Government of Singapore (\$360 billion) and the Pennsylvania Public School Employees Retirement System (\$56 billion), have converged on purchasing manufactured housing parks since the mid- to late 2010s (Baker et al. 2019). The investment value of mobile-home parks increases during recessions. Rents and fees in these parks are on the rise, forcing some people on fixed incomes to skip doses of prescribed medicines to stretch out the time between refills.

Together, these attributes make it easy for residents to fall behind on payments. Repossession is swift. Defaulting owners sometimes return home not to foreclosure notices or a changed lock, but to the negative space of their home having been towed away to an impound lot with their belongings inside it. Repossessed mobile homes are then sold for prices near the cost of a new home, but with a lower down payment and vastly reduced warranties.

White people are more likely to live in mobile homes than Black and Latino people, and they are especially likely to turn to mobile homes for retirement (Wilkinson 2020). While communities of color are less likely to inhabit these homes, when they do, the financial cuts are deeper. Mobile homes and manufactured housing have been key technologies of settler expansion, colonialism, and financialized extraction from Indigenous people in what has become known as North America since whites entered the continent. The first manufactured housing on the continent (unless you think of boats as ancestors of the mobile home) dates back to 1587. Manufactured houses proliferated across European colonial empires, like thousands of flags staked in the ground. Prefabrication of framing and facades allowed European colonists to instantly reproduce the aesthetics of home; seize territory through European legal doctrines like *terra nullius*; advance ideas of universal white superiority; protect and advance regimes of private property; actively remain ignorant of local materials, local ecologies, and place-based practices of homebuilding; and rapidly scale settlement. Mobile homes enabled the mobility of imperialists (Shapiro 2019a).

Settler colonialism is driven by one form of homesickness and manifests as another. Colonizers set sail suspended between an imagined future home, for which they searched, and the compulsive urge to re-create the home that

they left behind (cf. Van Herk 1991). The imposition of that dream/memory on Indigenous or otherwise colonized peoples through land theft, slavery, and extreme, protracted violence wrenches them too into a homesickness of a very different kind.

Today, the mobile home's relationship to colonialism is not just a vessel for fast, affordable settlement. Rather, Native Americans on reservations live in mobile homes more than any other social group. For example, in 2016, American Indians and Alaska Natives living on reservation land were twenty-one times more likely to finance a mobile-home loan versus a conventional home loan than the average American (Johnson and Todd 2017). The omnipresence of trailers on reservations stems from some two hundred years of the United States failing to uphold treaty obligations to Native American tribes stipulating that the United States would supply housing, not out of any form of charity but as a part of violence-backed exchanges for land (V. Davis 2002).¹² Trailers fall into the housing void of two centuries of double-dealing.

The United States holds most Native land in federal trust. This forced separation of land and homeownership aligns with what some call the "halfway homeownership" (Sullivan 2014) of the mobile homes that are spread across Native lands. In the early 1960s, the Department of Housing and Urban Development (HUD) began providing some funds for Indigenous housing predominantly through manufactured homes. "Hudda" has become shorthand on reservations for the boxy, manufactured homes that dot these sovereign territories (Edmunds et al. 2013). With plywood walls, fiberboard doors, laminate in-built furniture, and particleboard subflooring, no housing type uses as much polymerized wood as mobile homes.

Prior to HUD more closely regulating the construction of mobile homes in 1976, the formaldehyde levels in these state-provided homes were likely unimaginably high. By the twenty-first century, upward of 75 percent of these homes had become contaminated by mold due to water intrusion, climatically inappropriate design, or shoddy plumbing (Seltenrich 2012). As formaldehyde is hydrophilic, greater amounts of formaldehyde are released from these waterlogged engineered woods (Maddalena et al. 2009). Reliance on less expensive mobile homes can be further explained by the high rate of rejection for on-reservation conventional home loans (three in four applications), and, when granted, these loans carry the highest interest rates for any racial group (Cattaneo and Feir 2019).

Given the history of active neglect by the United States of its treaty obligations, it is perhaps unsurprising that the US government transferred 1,300 FEMA mobile homes to eighty-eight tribes between 2007 and 2009 (Cooper

2011). I've been contacted by members of nearly a dozen tribes about formaldehyde testing.¹³ Native Nations became a prime location in which to disappear these toxic assets from the market while appearing charitable.¹⁴ Race- and place-based exclusions from capital had worked to establish such acute housing desperation that these toxic homes, with their limited insulation, appeared attractive to tribes even in significantly colder climates.

Building homes in a factory, instead of on-site, combined with racist lending practices, enables mobile-home manufacturers to hyperconcentrate their profits. For example, multinational conglomerate holding company Berkshire Hathaway owns Clayton Homes, the largest mobile-home manufacturer in the United States and, by extension, the largest homebuilder of any type in the country. Clayton Homes operates a network of more than 1,600 dealerships and sells almost half of all manufactured housing in the United States. Its subsidiary lender, Vanderbilt Mortgage, has disproportionately lent to Latinx, Black, and Native mobile-home owners, at double the frequency of white purchasers (Baker and Wagner 2015).

The contours of racial capitalism are unambiguously distinct in the patterns of mobile-home financing. On average, communities of color pay an interest rate that is 0.73 higher than that paid by whites. Vanderbilt Mortgage agents have been recorded asserting to potential buyers that they are the only lender that will lend for mobile homes on the reservation, despite it being illegal to make such a claim; the tribe itself lends at a rate that is often half of what Vanderbilt charges (Baker and Wagner 2015). Similarly, the company posts Spanish-language advertisements in Texas stressing that Social Security numbers aren't needed to secure loans, then saddles undocumented immigrant families with loans that they will never reasonably be able to pay back. These impossible loans lend themselves to other forms of dispossession. On the Navajo reservation alone, Vanderbilt Mortgage had seized at least 691 mobile homes by 2015. Land that had been Black-owned since Reconstruction and "put up" to secure a predatory loan has also been repossessed (Baker and Wagner 2015).¹⁵ From the oldest residents to its newest, hawking the American Dream of homeownership is infused with homesickness.

Historian Keeanga-Yamahtta Taylor (2019) has detailed how banks, white property owners, and real estate agents have greatly profited off a conventional mortgage-financing system based on financial risk assessments that cut along racial lines. This structured market drove up the value of homes in white neighborhoods and aimed extortionary interest rates at communities of color that were deemed riskier. In a process that is now being repeated in the mobile-home market, lenders expedited default by charging communities of color

higher monthly payments for lower-quality housing than their white counterparts. Foreclosure would then result in Black homeowners losing their deposit, their investments in improvements, and accumulated equity. Taylor incisively calls this phenomenon “predatory inclusion.”

The demarcation between true affordability and predatory inclusion in the mobile-home market is deeply murky. As the largest form of unsubsidized affordable US housing—costing upward of 50 percent less per square foot than conventional homes—these factory-built homes no doubt keep roofs over the heads of tens of millions of people who might otherwise be even more housing insecure. Yet, thinking beyond their up-front cost, mobile homes swap the massive and singular weight of a large mortgage for a constellation of smaller hidden weights (chemical exposure, fewer consumer protections, mold exposure, energy poverty). Mobile-home owners who park their unit in mobile-home parks additionally face monthly lot fees, a disproportionate lack of water-service reliability (Pierce and Jimenez 2015), greater proximity to outdoor environmental exposures (Sullivan et al. 2021), and a heightened threat of eviction (Sullivan 2018). These issues totalize into a daunting set of obstacles for their low-income residents.

Riding in the back of a maintenance van in the southern Appalachians in late 2022, I caught a glimpse of how the split between home and real estate that creates the opportunity for profit to be extracted from housing vulnerability also gives rise to radical alternatives. Rather than simply lobbying for greater regulation of mobile-home tenure, financing, and manufacture, a group of predominantly Latinx immigrants had pooled their resources and bought their own mobile-home park, collectivizing landownership while keeping a private place of their own. What began as just a three-trailer cooperative has grown into a network of four parks and over eighty trailers in just a few years. These multiracial, low-income co-owners came together via shared need, even if they didn’t share politics. Other cooperative businesses (translation, child care, real estate, bookkeeping, property maintenance) have sprung up alongside the housing co-op. The maintenance co-op helps strip old, sometimes abandoned trailers down to rebuild them with the materials of a conventional home (see fig. 1.1). This doesn’t make them toxicant free, but it vastly reduces the heightened toxic burden of manufactured housing and any older housing that has significant maintenance issues.

On the wintry afternoon that I was visiting the group, part of the leadership was visiting a new property for which the financing had come through hours before via a national community wealth cooperative called Seed Commons. A group of five adults and an equal number of kids hooted and laughed as they



FIGURE 1.1. Photo of a mobile-home interior under renovation with hardwood floors and interior walls that are not made of engineered woods, December 2022. Photo by Nicholas Shapiro.

imagined all the happenings that would fill the cavernous building, slated to be an event space, store, and offices. Amid sharing their successes, the leaders made it clear that the acuteness of their members' housing vulnerability—immigrants having homes titled to citizens that could “get sold out from under them” and with no access to financing in their own names—drove their need for experimentation. This group, which works with a constellation of cooperatives under the umbrella of Colaborativa La Milpa, is not alone in banding together in this way. Approximately a thousand mobile-home parks across the country are now resident-owned communities. Many date back to the 1950s and 1960s and have a more conventional homeowners' association nonprofit at their center, making the community I visited on the outskirts of Asheville, North Carolina, rather unique.

Homeownership constitutes both the major driver of family wealth in the United States and the major driver of racial inequities in wealth. Even as homeownership inequity decreases, communities of color accumulate equity more slowly than white communities and have lower home values (Cattaneo and Feir 2019). And, as Taylor (2019) has argued, lending companies have extracted additional profit from Black homeowners' desire to participate in wealth

generation. The trailer parks I visited in North Carolina taught me another way forward. Land can be quickly collectivized, rather than better marketized, through the separation of real and wheel estate. With the right cost-sharing scheme, larger swaths of the structurally marginalized populations can access the possibility of gutting trailers, stripping them of engineered wood core, adding sufficient insulation, fixing maintenance issues that exacerbate chemical and fungal exposures, and mitigating much of their environmental and climate hazards. The home inspector with the maintenance co-op, whose van I had been rattling around in the back of, admitted to me that there was still much work to be done around the health, safety, and climate readiness of their homes. And hopefully I can join them in that.

Hello

Over the course of this book, you will encounter many people who will share deeply intimate betrayals, stories of grief, dreams, or just the minutiae of life. Under the circumstances, I should tell you at least a little bit about myself.

I was born in St. Louis, Missouri, to a Protestant mother from Baltimore and a Jewish father from New York City, both white. We lived there until I was seven, when my dad got a big break in Los Angeles. That break quickly broke, and we moved back to St. Louis nine months later to regroup. After two years of trying to figure out the next steps, we moved to Atlanta, where I lived until I was eighteen. This is where I think of when I hear the word *home*.

We lived an upper-middle-class life in midtown. My mom taught middle school and my dad worked at and later ran a museum. It might have been moving around a lot that made me more of a quiet observer, trying to figure out how things work, while also self-entertaining to the point that I got lost in my own thoughts. My teenage years were a mix of privilege and exposure. I attended private school, but also had friends and neighbors who died of overdoses. My high school was on the road that served as a key racial fault line; the streets that intersected it changed names so the addresses of white people would never be confused for those of Black people.

I had a sturdy safety net to return to even if weekends were charged with a minor proximity to violence. The high school party circuit in the early 2000s had created social scenes beyond any one school, where house parties would pull in people from across four to five predominantly public high schools. Eventually kids got entrepreneurial and started renting abandoned office parks, stables, and warehouses for massive parties. There was some handgun fire or brandishing, and eventually adult security guards were hired to wand and pat

people down at the entrance of our illegal parties. I somehow was at the helm for throwing the big graduation party my senior year. My first-ever text messages were with the friend I was organizing with who ended up in the ICU because he got curb-stomped before the party and couldn't speak.

In the summer of 2005, I was helping some friends from Texas drive their cars to Upstate New York for our sophomore year of college. Oblivious to the incoming hurricane, we stopped in New Orleans for only one night. The next day we exited the city in torrential rain over a pair of low-lying bridges, known as the twin-spans. One of my friends broke down crying, convinced we were going to be blown into the Gulf. Large sections of the twin-spans were later upended by the storm surge on its way to flooding the city. We, through no credit of our own, were unscathed.

Having first seen the city just before it was devastated demanded that I return to it, but I didn't make it back until the spring of 2009. My friend who thought we were going to die on the twin-spans was working in the kitchen of the hotel where we had stayed four years earlier; another one of the friends I was visiting had quit her job in construction and landed an entry-level administrative position at a law firm. Her days happened to be largely focused on the FEMA trailer product liability case. That was the beginning of this project.

My whiteness and the fact that the largest amount of organizing done around formaldehyde in the FEMA trailers took place through white networks in Mississippi skews the people I spoke to in the researching of this book. I undertook the ethnographic work in New Orleans at a time when the city was grappling with a second inundation, that of young educated white people streaming into the city. Many of the poorest Black people never returned after the storm (M. Davis 2010).

Rightly or wrongly, to me the city felt full of white, often northern, people trespassing into Black space in ways that were framed as altruistic but sometimes appeared to border on voyeuristic (Shapiro 2013). As a result, I chose to largely avoid recruiting people to talk to through nonprofit organizations that were full of transplants like myself looking for ways to connect with native, often Black, New Orleanians. My own perceptions of what was racially appropriate also inflected whom I felt comfortable "bothering" repeatedly for an interview. I could have and should have found ways to recruit in a way that didn't bias toward my own white networks because they felt less extractive, exoticizing, or serializing. Attempting to avoid perpetrating, what I viewed, as disrespectful behavior is not an alibi for telling a story that is at least partially racially lopsided.

Behind the Stories (Methods)

One of the fundamental challenges at the outset of this book was how to study a community that pushes the boundary of being a community, as its members have largely never met each other. Most studies of and campaigns for environmental justice have focused on place-based communities over the distributed groups of people that make up communities based on shared consumption that leads to shared exposure. Even this split between place-based and distributed harms doesn't fully hold when thinking of the strange commodities of the mobile home, perched somewhere adjacent to both real estate and automobiles, anchors of senses of place and movable products. The FEMA trailers are serialized places, functionally indistinguishable and often hundreds of miles away from each other like a tract housing development that was cut up and scattered across the country. The traditional place-based methods of studies in environmental justice provided only slight guidance for researching a community of nearly identical spaces that spanned much of the continent, from Puerto Rico to Alaska. The situation even differs quite dramatically from the distributed publics who live alongside infrastructural projects, like pipelines. Despite what I am told is a deeply annoying ability to point out FEMA trailers from the highway on road trips, locating FEMA trailer inhabitants one by one was not a viable method. Instead of finding FEMA trailers, I needed them to find me.

To accomplish this inversion of me as the tracker to the person being tracked down, I collaborated with Kim and Mike Fortun's interdisciplinary research group, known as the Asthma Files (cf. Fortun 2012: 453–56). Kim Fortun provided material support and introduced me to a private indoor air-quality lab—Prism Analytical Technologies, Inc.—that lent in-kind support in the form of instrumentation and chemical analyses.¹⁶ Martin Spartz, PhD, an analytical chemist at Prism; industrial hygienist Linda Kincaid, MPH (featured prominently in chapter 2); anthropologist of science Brandon Costelloe-Kuehn, PhD; and I designed a formaldehyde testing protocol that could be performed by me or mailed to FEMA trailer inhabitants that were too far away to visit. The protocol held constant as many variables as possible (see appendix 1).¹⁷

The Arkansas-based environmental activist Becky Gillette featured our call for participants on her website (toxictrailers.org) and also placed my email address in the website's top banner. Various news organizations pushed the call through their networks. I lay in wait. At first the emails and phone calls only trickled in, but within three months the rate of response picked up and plateaued at one to three new solicitations every week. Over the course of the next few years, I would be contacted by over two hundred people seeking

information about domestic chemical exposure, the vast majority of whom were residing in resold FEMA trailers. Beginning in the spring of 2011 and extending to the spring of 2012, I undertook over a dozen road trips to meet with residents of resold FEMA trailers. I drove several thousands of miles to conduct fifty-one in-person interviews with trailer residents in twelve states and double that number of phone interviews in fifteen additional states. I continued to test trailers until late 2019.¹⁸ I additionally interviewed thirty-five people (approximately half white and half Black) about their experiences living in FEMA trailers after Hurricanes Katrina and Rita, with dozens more brief anecdotes or stories finding me every month during my two years in New Orleans and Mississippi. All interviewees are given pseudonyms by default, but some preferred to use their real names, which I did.

I also attended trailer auctions, visited FEMA trailer staging areas, visited the offices of exposure scientists, participated in and observed domestic formaldehyde testing, argued about chemical risks with FEMA trailer resellers, sat in on a closed meeting of the community advisory panel of a federally funded study to assess the FEMA trailers' effect on children's health, and observed a community meeting where this study was presented to the community. I visited former FEMA trailer inhabitants in their rebuilt homes in Mississippi and Louisiana or in new homes hundreds of miles from the coast—as far afield as Massachusetts—and in hospital beds.

In addition to participant observation and interviews, I consulted thousands of pages of affidavits, deposition transcripts, medical records, and other legal documents as a law clerk in the office of a plaintiff attorney who was working on litigation regarding the FEMA trailers and formaldehyde product liability. I also wrote half a dozen Freedom of Information Act (FOIA) letters to federal agencies requesting data on both the original deployment and the resale of the FEMA trailers. One took over six years for me to receive the data I requested. I made a mini-documentary with Mariel Carr about the resold FEMA trailers on the Bakken shale field and nearby Native Nations that has been viewed more than 4.7 million times (Carr 2015). I worked with Grist, an environmental news nonprofit, to make a vehicle identification number (VIN) lookup tool with documents from my FOIA requests that enabled people who wondered whether their homes were FEMA trailers to check the origin. People still contact me about these issues a decade and a half after I began this research, albeit at the reduced rate of once every few months. Some projects that inform how I theorize change in this book and that were nearly all-consuming for years barely surface at all (Shapiro and Gehrke 2015; Dillon et al. 2018, 2019), as the point is not to tell a story of what I've done, but to communicate

my observations of what kind of work can produce what kind of impact on the various homesicknesses of the United States.

I came to these methods by taking seriously Kim Fortun's (2001: 6) charge to engage with multiple strata of data. In science and technology studies, the collaborative methods I outline above are often known as "making and doing." I find great inspiration from my colleagues in this field (to name just a few: Choy et al. 2009; Vera et al. 2020; CLEAR 2021; Downey and Zuiderent-Jerak 2021; Liboiron et al. 2021; Schroeder et al. 2021) even if the moniker doesn't sit quite right with me. Writing, making scientific instruments, narrating documentaries, and building remediation tools are all simply different ways of thinking about an issue. I didn't understand this until Tim Choy (2011) pointed this out to me years ago. I write until I hit a limit, engineer until I hit a limit, write again, limit, remediate, limit, art, limit, and so on. Each mode of inquiry helped broaden the standpoints I can represent in this book. It has also helped me feel more confident that the countless hours that exposed people spent talking to me was worth their while.

FOR HALF A CENTURY, the potential crisis of indoor formaldehyde, largely emanating from the engineered woods it holds together, has emerged with an episodic frequency. European and Middle Eastern chemists who wrote "Formaldehyde in the Indoor Environment" in the journal *Chemical Reviews* noted that "every few years, the 'formaldehyde discussion' [in the United States] is resuscitated" (Salthammer et al. 2010: 2565). *Every few years*, that is, systematic domestic chemical exposures break into the discursive foreground only to be quelled by perfunctory reviews, regressive policy, or, more often than not, the simple ebb of time. *Every few years* formaldehyde fails to crest cultural horizons of significance despite the FEMA trailers' service in the wake of the costliest natural disaster in US history.

Beyond the silent hazards of chemicals, more than thirty million US households, over one in five, live in the presence of significant physical or health hazards, such as dilapidated structures, poor heating, damaged plumbing, or gas leaks. Only 3 percent of public housing units that are home to a disabled member actually have a unit with accessibility features (Ross et al. 2016). *Homesick* offers one of many inroads to this larger condition of living in what is now known as the United States, valences of which this nation also inflicts on the rest of the planet.

More than a tale of a chemical and its favorite form of housing, this book is a story about struggles to survive and extinguish the many forces of domestic

immiseration. It is a methodological story about how to frame a problem and what kinds of possibilities for change emerge from different understandings of what the problem is. It's about how homesickness was a founding principle and remains a foundational texture of life in this nation, and how homesickness for dramatically different ways of dwelling and relating bubbles up from this surreal misalignment of dream and actuality. It is also an unflinching blow-by-blow history of the state violence advanced by federal emergency housing. Being homesick for an otherwise future helps us think past an environmentalism that regulates chemicals one at a time, past illusory accountability systems, and toward an understanding of the multiple and disparate approaches needed for meaningful change. If living differently is one of the basic challenges of the twenty-first century, where we spend most of our time, at home, seems like a good place to start.

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NOTES

PREFACE

1. Bulbancha, meaning “the place of many languages” in Choctaw, is the original name for what is now called New Orleans. Long before colonists set foot on the land, it hosted more than forty distinct Native groups. What is currently referred to as Lake Pontchartrain was originally known as Okwata, a Choctaw word meaning “wide water.” The lands and waters of the Okwata basin have been inhabited by Indigenous peoples for upward of six thousand years and include unceded territories of the Choctaw, Bayougoula, Mougoulacha, Chitimacha, Oumas, Tangipahoa, Colapissa, and Quinipissa. See bulbanchais-stillaplace.org for more information.

2. The form of this discontinuous, albeit vital, mode of relating is similar to that identified by Zoë Wool in an American veterans’ hospital, in which the specificities of harm “have a collectivizing effect, one that resides not in coherent narratives, testimonies or rallying cries, but in resonant common knowledge that lingers in bodies and the space they inhabit together” (2011: 3). The paradox of being simultaneously supported and worn down, isolated and brought together, is perhaps best synthesized by Benny Maygarden in this chapter’s epigraph: “Formaldehyde is the only thing keeping me alive!”

3. The storm fell short of its predicted destructive force and focused its ire on less populated swaths of the region. In contrast to Katrina’s lasting and multiple impacts, Rita’s legacy primarily takes the form of evacuation policy (Litman 2006). The majority of deaths attributed to Hurricane Rita (90 of 108) were related to the massive and muddled evacuation process of between 2.5 to 3.7 million Texas and Louisiana residents (Zachria and Patel 2006).

4. The federal government has not always been responsible for providing postdisaster housing. The first instance was in 1969, when Housing and Urban Development (HUD) sent several thousand mobile homes to house those displaced by Hurricane Camille, which made landfall on the central Gulf Coast. This intervention was enabled by the Disaster Relief Act of 1969 (Moss 1999: 316) and the increasing federalization of disaster response due to Cold War civil defense security regimes (Rozario 2007: 156–73). The

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provision of emergency housing to discrete disasters remains a federal responsibility today, now under FEMA.

5. Over 100 million cubic yards of debris were removed from the region, one hundred times more than Ground Zero in New York. Within a month of the hurricane's landfall, some 1.36 million diasporic Gulf Coast residents applied to FEMA for individual assistance grants. As displaced people fanned out to every one of the fifty states, hundreds of millions of pounds of emergency supplies were set in motion toward the Gulf Coast.

6. Very few services were provided to counter the isolation of these sites. Only one federally funded program attempted to mitigate the seclusion of group sites. The program, a bus service called LA Moves, was launched in January 2007, but by June of the same year it only served two of the hundreds of remaining group sites. The service did not provide transportation to welfare-to-work sites, employment, or human and medical services. Ridership was sparse (GAO 2008: 4).

7. Japanese American internment during World War II is the second-largest similar event (approximately 190,000 fewer inhabitants).

8. This process began when an emergency waiver of local rules against the placement of trailers outside of designated trailer parks expired on May 31, 2008. It wasn't until 2010 that the city council began planning how to enforce this regulation and remove the remaining 256 trailers (at peak usage, there were 23,000 FEMA trailers in New Orleans). The trailers were said to be "preventing recovery, lowering real-estate values for neighboring homes and serving as unwelcome reminders of struggles that residents want to move past" (Cohen 2010).

INTRODUCTION

1. This line of argumentation is made possible by an explosion of critical studies of toxicity in the early twenty-first century: Murphy 2006, 2017; Auyero and Swistun 2008; Frickel 2008; Roberts 2010, 2014; Guthman 2011; Landecker 2011, 2019; Agard-Jones 2012, 2013; Chen 2012; Boudia and Jas 2013, 2014; Cram 2016; Liboiron 2016, 2021; Nading 2017, 2020; Simmons 2017; Calvillo 2018, 2023; Davies 2018; Kenner 2018; Liboiron et al. 2018; Tironi 2018; Wylie 2018; Blanchette 2019; Hepler-Smith 2019; Thylstrup 2019; Balayannis and Garnett 2020; Feser 2020; Grandia 2020; Lefève et al. 2020; Rubaii 2020; Shadaan and Murphy 2020; Spackman 2020; Boudia et al. 2021; Müller 2021; Ntapanta 2021; Saxton 2021; Wakefield-Rann 2021; Bond 2022; Jaworski 2022; Adams 2023; Mah 2023; TenHoor and Varner 2023; Varner, forthcoming.

2. Deep gratitude to M Murphy for the succinct insights that breathed life into this paragraph.

3. These prompts are in line with Charles Hale's methodological push for anthropology to expand its commitments beyond primarily or exclusively serving "institutional space from which it emanates" (2006: 104) and extends that analysis to include methods far beyond the standard social scientific toolbox. As I tell my life science students in order to underline the importance of the social sciences and humanities, "Problems identified by life sciences often aren't remedied by life science approaches alone." The same is true of anthropology identified problems.

4. If you are having difficulty imagining why current approaches are insufficient and what alternative approaches might be, the former will be addressed two paragraphs below and the final chapter details the latter.

5. To gesture to how long-standing and how widespread this sticking point between short-term survival and full-scale upheaval is, over a century earlier socialist-theorist Rosa Luxemburg made a point similar to those in the national antifracking movement when she decried that mitigating harms through labor organizing would amount to “the suppression of the abuses of capitalism instead of suppression of capitalism itself” (2008: 90).

6. Anticipating in these instances is not desiring for things to go wrong. Although there are moments for some when science, litigation, regulation, or activism feel like they have all run their unproductive course and hope can only be imagined through some sort of swift destruction. Of cases like this, I think of an email that Harriett, whom you’ll meet in chapter 2, wrote to me when I sent her a draft of that chapter. She noted that food tasted like tin foil most of the time, she has chronic acute diarrhea, and her husband’s left eye now waters so much that he walks around the house with one eye shut. She summarized their state of being: “So, that is where we are; deteriorating, broke and going downhill. . . . I don’t know how this will end. . . . I keep hoping we will get wiped out with a tornado or something so we can start over . . . otherwise, there is no hope for us.”

7. As elaborated in chapter 3, this argument is deeply inspired by Elizabeth Povinelli’s observation that “making die, letting die and making live are organized within and through a specific imaginary of the event and eventfulness” (2011: 134). But the crux of my argument is that the issue is not just that slow, agentless exposures are less likely to inspire public and scientific concern, as are the ongoing subclinical illnesses that result from such exposures. Understanding the logics of that imaginary is extremely helpful for understanding distributions of abandonment, but to think that substantive change, rather than harm optimization, can be attained through the cultivation of eventfulness is, in my experience, more often than not a pernicious trap.

8. Spaces of sanctioned adversarial contention are often designed to stabilize power and provide for the performance of accountability (see chapter 4). Of course, against all odds victories are possible, yet the terms of success are often deeply circumscribed. Fighting these available battles is important, but they are not the end of the road.

9. Data that I acquired by way of Freedom of Information Act requests suggest that, in the wake of the hurricanes, many more units were acquisitioned than inhabited, which is why this number is thirty thousand units higher than the number of units deployed.

10. As Laura Pulido (2016: 2) has touched on in the case of the nearly 40 percent of Flint, Michigan, residents who identify as white, white people can become devalued through their proximity to Blackness by living in a Black majority city.

11. The one exception to this depreciation trend is when mobile homes are placed on foundations on owned land and federal regulators categorize the trailers as real estate rather than personal property (Wilkinson 2020: 57). This scenario accounts for the minority of mobile-home tenure (19 percent in 2019) (Park 2022).

12. As noted in the US Commissioner of Indian Affairs annual report of 1877, Native Nations “were induced by the authorized agents of the Government to give up their old homes by the promise of assistance in building new ones. Yet I am informed that no provision has been made by the Government for building them houses or even assisting them to tools, nails, lumber, &c.” (“Report of the Commissioner of Indian Affairs,” 565–66).

13. To respect tribal sovereignty, no work conducted on tribal land is documented in this book. All work conducted on sovereign tribal lands was conducted as a pro bono service to individuals or tribal governments upon their request and is not sharable. I have, however, included research conducted off tribal land with consenting Indigenous interlocutors in this book.

14. The Recreational Vehicle Industry Association was worried that the glut of trailers would drive down the secondhand mobile-home market. After the court order to not sell the FEMA trailers expired, the industry attempted to lobby Congress and court aid organizations in the hopes of sending over 150,000 bargain-priced FEMA trailers to Haiti, which experienced a 7.0 earthquake in early 2010. This plan did not materialize, but the Clinton Foundation did send manufactured school buildings from Clayton Homes to Haiti. These were found to have elevated formaldehyde levels that made students ill (I. Macdonald 2011).

15. The manufactured housing market experienced a securitization-driven market meltdown in the late 1990s that foreshadowed the bursting of the larger housing bubble around a decade later. The boom in risky chattel loans was made possible by large increases in the securitization of manufactured home loans—from \$184 million in 1987 to \$15 billion in 1999. When the national housing-market bubble popped in 2007–8, hundreds of billions of federal dollars were dedicated to rescuing mortgages from default. This program did not include chattel mobile-home loans (Burkhart 2010).

16. Prism Analytical Technologies has since been purchased by Enthalpy Analytical.

17. The homogeneity control protocol for our study was as follows: The indoor air temperature would be maintained at 72–75 degrees for at least twenty-four hours prior to testing. For tests administered by homeowners, photographic evidence of the thermostat was required (clear camera-phone pictures at the time of testing were sufficient; preferably picture-messaged to the study telephone at the time of testing to verify the time of test). All windows had to remain closed for twenty-four hours prior to the test. All tests would occur at the same time of day. One-hour sampling began between 1:30 p.m. and 3 p.m., preferably at 2 p.m. Tests did not occur on rainy days or on days that were abnormally warm or cool, which was defined by local norms. Tests did not occur on windy days (defined by leaves and small twigs in constant motion, or wind that can extend a lightweight flag—level 3 on the Beaufort scale). The sampling device was placed on a nonformaldehyde-emitting surface in the middle of the bed in the master bedroom. Photographic evidence of the device location was also required.

18. Chapter 5 details the further multicontinental work involved in building open-source monitoring and remediation equipment that led to dozens of further tests.