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**Spaces of Uneventful Disaster**  
Tracking Emergency Housing and  
Domestic Chemical Exposures from New  
Orleans to National Crises

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Green Templeton College  
University of Oxford  
Hilary Term 2014

A dissertation submitted in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy,  
Institute for Social and Cultural Anthropology,  
University of Oxford



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**Abstract**

In this thesis, I examine the politics, poetics, and logics of uneventful human harm in the United States by tracking the life and afterlife of a chemically contaminated emergency housing unit. In 2005, the Federal Emergency Management Agency (FEMA) deployed 120,000 trailers to the US Gulf Coast to house those displaced by Hurricanes Katrina and Rita. Chemical testing, spurred by reports of inhabitant illness, revealed elevated levels of formaldehyde emanating from the plywood walls of the trailers. After being reclaimed by the federal government and beginning in 2010, the FEMA trailers were resold at auction to every corner of the country. Resold trailers gravitated to precarious populations at the poles of rural capital accumulation—from oil patches in North Dakota to reservations in Washington. These trailers serve as an exceptional substrate for an investigation into the anatomy of the uneventful as they once approached the apex of eventfulness as a national controversy and now reside in the shadows of the everyday.

This thesis apprehends and theorizes these dispersed and ordinary instruments of domestic harm across multiple registers: epistemological, material, spatial, and affective. I examine how failures of matter and meaning shaped and patterned the lives of those who inhabited the FEMA trailers as their lives became framed by chemical off-gassing, architectural insufficiency, material deterioration, and electrical short-circuiting. Crossing scales and venues, I interrogate the modalities of scientific incomprehension that erode the perception, admittance, or substantiation of mass chemical exposure. These technical processes, along with cultural horizons of eventfulness and the chronicity of disaster, foreclosed avenues of toxic harm accountability. These ‘economies of abandonment’ bring into relief the contemporary biopolitical priorities in which the FEMA trailer—an ostensible protection from harm that fosters illness—becomes possible. FEMA trailer residents attend to the minute, gradual, and ongoing symptoms of exposure to discern the reality and magnitude of residential contamination. The body of the exposed becomes both an epistemic instrument and, across time, the means of making low-level, chronic, and cruddy chemical exposures into eventful instances that drive individuals to action.

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All un-attributed photographs or maps are my own.

## ACRONYMS

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AbD	Accumulation by Dispossession
ATSDR	Agency for Toxic Substances Disease Registry
CDC	Centers for Disease Control and Prevention
COPD	Chronic Obstructive Pulmonary Disease
DIY	Do-it-yourself
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FOIA	Freedom of Information Act
GAO	Government Accountability Office
GSA	General Services Administration
HUD	Department of Housing and Urban Development
PD	Peritoneal dialysis
PPB	Parts per billion
PPM	Parts per million
STS	Science and technology studies
VOC	Volatile Organic Chemical
WHO	World Health Organization

## ACKNOWLEDGEMENTS

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I would like to extend my first thanks to those whose observations and experiences fill this thesis. None of this work would have been possible without generous invitations into homes and workplaces. A casual conversation with Dakota Moe and an open-minded invitation by Aaron Alquist drew me into the legal fray, which unfolded into the rest of this thesis. Becky Gillette was supportive and insightful from the start. Her tireless work on formaldehyde now spans the better part of a decade and enabled every single word of this thesis. Thanks also to Jimmy Bankston for always keeping me in the loop. Harriett Mcfeely, Sharon Stinson, Charlie Syrie, Gina Phillips, Jessie Dilbeck, Frannie, Jennifer Jackson, Audrey Evans, Paul Stewart, Marty Horine, Ron Fowler, Nancy Martinez, and numerous others, thank you for your persistent insights and perseverance. All I can hope is that I have done right by you.

Special thanks goes to Elisabeth Hsu for encouraging me to take on this project and to pursue doctoral studies. Thank you for teaching me what ethnographic robustness really means, for incisive and patient comments, and for your dedication to your students. Javier Lezaun joined this project mid-stream but was nonetheless invaluable. His calm re-directions and encouragement recalibrated both this thesis and my understanding of what it means to be a generous scholar.

Kim Fortun, Mike Fortun, and the rest of the Asthma Files team laid the early foundation for this work. Kim not only inspired this project—both methodologically and theoretically—but facilitated and lent material support to the analytical chemistry aspect of this thesis, for which I remain thoroughly indebted. Brandon Costelloe-Kuehn was an indispensable partner throughout the formaldehyde testing sub-study. I owe an enormous amount of gratitude to Marty Spartz and the rest of the staff at Prisim Analytical Technologies for their consistent help and collaboration. Likewise Linda Kincaid lent time, expertise, technology, and inspiration. When I give talks about Linda's work audience members invariably, interject some variation of "she's so cool." I feel the same way.

The wisdom of friends and colleagues have improved this thesis enormously. I am especially grateful for comments from Christabel Stirling, Jason Pine, Emilie Cloatre, Caroline Potter, Peter Kirby, Ali Feser, Biao Xiang, Natalie Porter, Tristan Jones, Rose Deller, Nerea Calvillo, Ari Braverman, Ella Butler, Martyn Pickersgill, Nadine Levin, Noémi Tousignant, Christien Tompkins, Michelle Murphy, and the Oxford affect theory reading group. Thanks also to Lashon Daley for contributing a helpful detail. Special thanks go to Anna Lora-Wainwright, my internal examiner for her comments and questions. I am deeply grateful to Elizabeth Povinelli, my external examiner, for inspiring much of the analysis herein and for her systematic provocations that will surely prove to be invaluable as this project moves into its next form.

At Oxford, material support from the Philip Bagby Bequest of the Institute of Social and Cultural Anthropology, a fieldwork grant from Green Templeton College, and the

University Vice Chancellor's Fund helped make ends meet. A National Endowment for the Humanities fellowship at USC provided a pivotal month of reflection and interdisciplinary exploration in the middle of my fieldwork. I feel truly grateful for that time with Tara McPherson, the Vectors team, and the other summer institute fellows. A fellowship at the Chemical Heritage Foundation supported the historical research in the final chapter and bestowed me with a supportive community of friends and colleagues as I sprinted to the finish line.

In the process of researching and writing this thesis I have leaned on my friends and want to thank those who lent camaraderie, much needed distraction, and enduring support (Robert Rapport, Jonah Rimer, Naima Woods, Roger Norum, Sam Feather, Alice Ream, Paul Cavanagh, Alejandro Reig), company and patience on long road trips (Katy Jane Tull, Veronica Hunsinger-Loe), and shelter when I was underfunded (Nikki Thanos, Ken Foster, Kathleen Loe, numerous couchsurfing.org hosts). I was lucky enough to have friends to collaborate with on this caper. Ariella Cohen's investigative techniques were instructive and our travels through Louisiana, Alabama, Mississippi, and Florida are vital to this thesis. Akasha Rabut, thank you for enduring exposures with me in Louisiana, Oklahoma, and Texas and for your photos that animate this text. A huge amount of gratitude needs to be extended to Jakob Rosenzweig for spending days with me pouring over hundreds of thousands of data points to fashion the resale map. Andrew Curtis and Michael Athanson also provided valuable mapping support. It was a gift to discuss scientific apprehension and statistical eventfulness with Nicole Novak.

My ultimate thanks is reserved for my family—Michael, Lisa, and Kate—who taught me all I know about curiosity, thoughtfulness, and working with passion. I'm sorry for always coming home in pieces, knowing that I would always leave whole—reassembled by your love, patience, and unwavering support.

## STAGING AREA

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### Introduction

In the early hours of August 29<sup>th</sup> 2005, Hurricane Katrina cut across the extreme southeastern tip of Louisiana before making its final landfall forty miles east of New Orleans, near the Louisiana-Mississippi boarder. The storm bore winds in excess of 120 miles an hour and a storm surge with a height of 28 feet penetrated upwards of 12 miles inland. Wielding a diameter of more than 400 miles, the hurricane spread its devastation across the central Gulf Coast. Coastal Mississippi suffered near total destruction. Katrina carved its way north through Mississippi, maintaining hurricane intensity for almost 100 miles and spawning dozens of tornados—some as far north as Pennsylvania—before dissolving into heavy rain over the Midwest.

Contrary to widespread assumption, the storm itself did not directly strike New Orleans; rather it swung east and largely missed the city. As the minimally damaged city breathed a sigh of relief, a surge of seawater—generated and propelled by the hurricane as it made landfall in Mississippi—swept towards New Orleans. The levees that make up the eastern portion of New Orleans' flood protection system yawn out into the Gulf Coast. In a Y-shape, two long barriers of concrete taper towards each other, meeting at the mouth of a manmade shipping channel that leads to the city's inner harbor and canals. The westward storm surge became a concentrated torrent as it encountered this funnel-shaped entrance to New Orleans's internal waterways. The swell, amplified in intensity by the very infrastructure that was designed to protect the city, compromised New Orleans' network of levees in over fifty locations. An estimated 131 billion gallons of water poured into the city until the floodwater reached equilibrium with the lake that demarcates its northern border,

some three days later.

Eighty percent of New Orleans lay submerged. The communities most vulnerable to flooding (by proximity to weak levees and greater distance below sea level) were largely poor and/or black (Bakker et al. 2005, Bullard & Wright 2009). Longstanding social inequalities sculpted correlations between income and elevation above sea level in New Orleans, and predisposed those at the lower end of both spectrums to greater risks of flood-related displacement. 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).

Less than a month after Katrina inundated the central Gulf Coast, Hurricane Rita careened up the Texas-Louisiana border. The storm fell short of its predicted destructive force and focused its ire on less populated swaths of the region. Upending smaller coastal communities, the hurricane pushed the overwhelmed federal response even closer towards its breaking point. In contrast to Katrina's lasting and multiple impacts, the legacy of Rita is likely to be relegated to evacuation policy and not the actual destruction of the storm (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 – 3.7 million Texas and Louisiana residents (Zachria & Patel 2006).

Damage from both hurricanes that tore into the central Gulf Coast in 2005 spanned hundreds of miles of coastline, from east Texas to southwestern Alabama. Between 1 and 1.5 million people were displaced. Regionally available rental units, hotels, and motels quickly reached capacity. After months spent shifting between the homes of friends, relatives, and shelters, some 300,000 displaced persons were eventually housed in trailers supplied by the

Federal Emergency Management Agency (FEMA). These diminutive emergency housing units were deployed to both the driveways of homes-in-ruin, and to federally run trailer parks for those who possessed no real estate of their own.

As the waters receded from New Orleans weeks after the multi-part failure of the city's flood protection system, FEMA was finalizing contracts with recreational vehicle makers that would eventually total over \$2.7 billion (Subcommittee on Commerce, Trade, and Consumer Protection Staff 2010: 1). Gulf Stream Coach Inc, which was awarded the largest trailer production agreement, initiated correspondence with FEMA contract specialists within twenty-four hours of the city's inundation.<sup>1</sup> Within months, some 120,000 emergency housing units dotted the map from Texas to Alabama. Their placements emanated outward from the two storm paths that hooked into the belly of the Gulf Coast.

The displaced began to transition from shelters or the over-crowded homes of friends and relatives to 250-square foot travel trailers. Tens of thousands of trailers were placed in the backyards, driveways, or front lawns of returned evacuees. Thousands more were placed on federally rented land in ad hoc clusters or trailer parks. The recovery assistance of the trailer program benefited those who owned property—specifically property that had enough space for a trailer in the front, side, or back yard—more than renters or inhabitants of public housing. The latter would often be assigned residency in far-flung FEMA trailer parks that bore little access to transportation, childcare, medical facilities, and social services (Larrance et al. 2007, Children's Health Fund 2008).<sup>2</sup>

Sixty different manufacturers supplied the trailers, many built especially for FEMA,

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<sup>1</sup> Letter from Phil Savari, Gulf Stream Executive Vice President, to Bryan McCreary (Aug. 30, 2005). Collected by the Subcommittee on Investigations and Oversight, Committee on Science and Technology, U.S. House of Representatives.

<sup>2</sup> This is not true of *all* public housing residents or renters, as many in both categories used social networks to get trailers placed on friends' property and some residents of public housing were assigned to "clusters" of trailers not far afield of their pre-Katrina residence.

while others were simply bought off the lots of nearby dealerships. FEMA furnished three basic types of emergency housing unit. The most common and smallest was the travel trailer. These units were designed as recreational vehicles for short-term habitation and FEMA has now vowed to never use them again. The second most common and largest was the mobile home, which are designed as permanent homes and now make up the mainstay of FEMA's provisional housing strategy. The third and lowest production type were so-called "park models" which are a hybrid of the two previous types, and have also been discontinued.



**Figure S.1 FEMA trailer park under construction in Louisiana, late 2005. Photo by Marvin Nauman/FEMA.**

Long before the FEMA trailers became a symbol of a protracted and painful recovery, they were cornerstones of the infrastructure of hope. These gleaming white boxes rode into the dismal post-disaster landscape on trains and behind trucks. The trailers were beacons of the possibility of return and of reassembling a livable life. Trailer inhabitants spanned every race in the Gulf South and all classes, although lower-income residents were disproportionately higher in population and averaged a longer occupancy than their wealthy counterparts.<sup>3</sup>

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<sup>3</sup> Using FEMA trailer park populations as a proxy for all FEMA trailer residents, the majority of FEMA trailer

As displaced residents opened their emergency housing unit door for the first time, they were often met by what many described as “a blast of chemicals” that made their eyes water and cut their breaths short. Word quickly spread of the initially abrasive atmosphere of the FEMA trailers and airing the units out for days or weeks became a de facto inhabitation protocol across the Gulf. As overwhelming odors—uniformly characterized as “chemical”—became diluted by constant ventilation, inhabitants began to settle into their trailers. However, many developed further respiratory irritation, nosebleeds, or dermatological aberrations. Others, who felt no immediate reaction to the indoor air of their FEMA trailers came down with colds more frequently than usual, had persistent nasal congestion, were gripped by constantly simmering headaches, or found themselves reaching for their asthma inhaler more often than they had before moving in.

Activists began suspecting high formaldehyde content emanating from the particleboard walls of the trailers as the molecular culprit of these manifold illnesses. Due to the high use of engineered woods that utilize formaldehyde as a binding agent, the high ratio of exterior walls to indoor airspace, and minimal ventilation, formaldehyde has been a notorious issue in the mobile home industry for over thirty years (Salthammer et al. 2010). In the spring of 2006, an environmental advocacy group began testing FEMA trailers for formaldehyde and called for further testing by federal agencies. These trailers and the domestic chemical exposures they cultivated are the primary figures of the thesis to follow.

When I entered the field in August of 2010—a month before the fifth anniversary of Katrina—the last of the FEMA trailers were being evicted from New Orleans. City Hall reinstated a pre-Katrina ordinance banning the placement of trailers within Orleans Parish. FEMA trailer residents were facing fines of over \$100 a day. Simultaneously, the federal

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inhabitants in Louisiana were black, a majority white in Mississippi (Larrance et al 2007).

government was attempting to cut its losses by auctioning off upwards of 150,000 returned or unused housing units.<sup>4</sup> Mediated by speculative entrepreneurs and the open market, FEMA trailers were finding new homes across the country. By 2011, I was visiting both FEMA trailer residents in New Orleans facing harsh fines for not having found permanent post-hurricane housing and new FEMA trailer residents across rural and suburban America. Trailer doors as federal property were closing for those displaced by hurricanes but they were re-opening all across the United States as private property.

In the first year of my two-year fieldwork period (2010-2012), the lives and the after-lives of FEMA trailers overlapped. My entrance to the field occurred at a temporally central moment to the larger story of the FEMA trailers. This thesis investigates both segments of the travel of these trailers: the first half reaches into the past and the latter half tracks current movements. Taking a cue from the natural sciences, Gregory Bateson notes that “things” are never actually true objects of study. Rather, the unceasing meta-relations of things are what we observe and record in both the natural and social sciences. As with any object-centered ethnography, my focus on the FEMA trailer is, in practice, a study on “an infinite regress of relationships” (Bateson 1978: 249) that stem from or reach towards these mass-produced homes.

Chasing up the diverse entanglements of FEMA trailers sent me all over the country (from the Gulf Coast to Massachusetts, Nebraska, and California) and brought me into contact with an array of people (scientists, activists, trailer salesmen, federal employees, journalists, lawyers, and a broad range of inhabitants). As my fieldwork progressed, what at first felt like a haphazard assemblage of people and things across disparate spaces became multiple instantiations of what I see as the central concern of this thesis: the politics, poetics,

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<sup>4</sup> Data I acquired by way of Freedom of Information requests suggests that in the wake of the hurricanes many more units were acquisitioned than inhabited.

and logics of uneventful human harm. Scientific imperceptibility (Murphy 2006) is no doubt important in understanding the uneventfulness of chemical wounding, but the issues at hand exceed technical histories. Commonplace corrosive exposures fail to crest *cultural* horizons of significance. Technical accounts are but one facet of the coalescing of phenomena into a socially recognizable event.

The FEMA trailers are an excellent substrate for an investigation into the anatomy of the uneventful as they once approached the very cusp of eventfulness while they now reside in the shadows of the everyday. The original deployment of the FEMA trailers is memorialized not just in the social histories of post-Katrina recovery, but also in the history of formaldehyde itself. A recent article in *Chemical Reviews* entitled “Formaldehyde in the Indoor Environment” highlights the discursive impact of the FEMA trailers, “In the United States, discussion about formaldehyde in mobile homes returned to public attention when survivors of hurricane Katrina, who live in trailers provided by the U.S. Department of Homeland Security (FEMA), complained about strange odors and adverse health effects” (Salthammer et al. 2010: 2560).<sup>5</sup> Not only do Salthammer et al. recognize the FEMA trailer’s impact upon the chemical’s history but they further identify the cyclical nature of formaldehyde controversy. The FEMA trailers do not stand alone in history. Indeed, domestic formaldehyde first surfaced as an issue of concern in the late 1970s following a wave of mobile home-related illnesses. But, as architectural historian Janet Ore relates:

mobile home syndrome hurt primarily blue-collar families who relied on private, individual actions for reparations, a nationwide, working-class advocacy movement never

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<sup>5</sup> Awareness to the FEMA trailer formaldehyde exposure was not limited to US cultures of science. As an indication, the authors of this paper are two chemists from Germany and one chemical engineer from Turkey. As will be discussed in Chapter Two this public attention was no historical inevitability. An environmental activist cracked the story open with air quality test funding from a grassroots environmental organization that sought to seize upon the FEMA trailers as a means of exposing the prevalence of formaldehyde exposure and harm.

coalesced around toxic domestic ecosystems. Little change occurred in legislation regulating formaldehyde in building materials. (Ore 2011: 262)

Federal regulators set a maximum formaldehyde threshold for the construction materials used in manufactured housing in 1984.<sup>6</sup> The level—3 parts per million—was multiple orders of magnitude higher than the level at which formaldehyde began to physically irritate humans, as already demonstrated by the scientific literature of the day (ibid: 285). This same maximum allowable concentration remains in force today.

Since the 1980s, the potential crisis of indoor formaldehyde has emerged with an episodic frequency; as Salthammer et al. go on to reveal, “Every few years, the ‘formaldehyde discussion’ is resuscitated” (Salthammer et al. 2010: 2565). The authors then cite the FEMA trailers as the most recent of such resuscitations. *Every few years* systematic domestic chemical exposures break into the discursive foreground only to be quelled by perfunctory policies or, more often than not, the simple ebb of time. *Every few years* formaldehyde fails to become an event, an occurrence that, in the words of philosopher Alain Badiou, “compels us to decide a *new* way of being” (2001: 41). An example of such an event that precipitated a new way of being was the 1962 publication of Rachel Carson’s *Silent Spring*, which sparked a national dialogue around pesticides, significant regulation, and the dawn of the modern environmental movement.<sup>7</sup> Domestic formaldehyde has yet to have its *Silent Spring* moment that goes beyond simply garnering moments of public attention to rupturing “the barrier of public indifference” (Rachel Carson quoted in Brooks 1989: 34; also

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<sup>6</sup> It is important to underline that this regulation does *not* govern the levels of formaldehyde in the ambient air of a mobile home but rather the individual materials used. Not accounted for in this regulation are the various proportions of engineered woods used in the manufacture of homes, varying ventilation rates, and large differences in square footage. One industrial hygienist that I spoke with told me that two samples taken from a standard 4” by 8” sheet of particleboard could possess formaldehyde off-gassing rates that bare a thee-fold difference. If samples for enforcing this regulation were taken from a small portion of plywood they would hardly represent the off-gassed chemicals emanating from the entire board let alone the entire home.

<sup>7</sup> Many of the scientists I spoke with in the course of this research cite *Silent Spring* as influencing their career discussions.

*cf* Lockwood 2012).

Much of the notoriety of the FEMA trailers is due to their service in the wake of the costliest natural disaster in US history—a definitive event and locus of sustained media attention. Their synchronous deployment, relative geographic density and single distributor garnered further eventfulness. In contrast, the subsequent resale of the FEMA trailers occurred over a number of years and across the entirety of the country. Thousands of different resellers propagated these units to nearly every state, and most units changed hands several times before reaching their final disposition. Many inhabitants had no idea they were purchasing a FEMA trailer, or if they did, what that meant. Lawyers wouldn't take up their cases. Reporters who had covered the original FEMA trailer formaldehyde issue would not publish their stories.

When residents called federal authorities to see what steps could be taken to mitigate their exposures or to inquire about their consumer rights, they were simply told, “get out.” By the time I left the field, the eventfulness of the FEMA trailers had been both actively dismantled and passively eroded. Inhabitants would discover their home to be a FEMA trailer by happenstance (such as finding a FEMA pamphlet in a heating vent, or noticing a sticker with FEMA's number on the inside of a cabinet door) or by endless hours of searching Internet in pursuit of the source of a constellation of ills.<sup>8</sup> An ongoing crisis that had made international headlines was reduced to the silent, invisible, and internalized dysfunctions of embodied formaldehyde.

## **Domestic Formaldehyde in the US**

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<sup>8</sup> Others were told that they were buying a FEMA trailer but were under the impression that the qualification of their future home by the name of a government agency signified a more exacting standard of quality.

Indoor air quality research is progressively illuminating the multitude of contaminants harbored by indoor atmospheres. From lead particles to plasticizers and formaldehyde, there is increasing agreement that indoor air is a primary root of environmental exposures. Indoor chemical concentrations are generally higher than corresponding outdoor concentrations (Gonzalez-Flesca 1999, Khoder et al. 2000) and nearly 90 percent of Americans' time is spent indoors (Klepeis et al. 2001). Formaldehyde is a nearly ubiquitous chemical in the domestic environment. It is used as a setting agent, binding together particle board walls or hardboard cabinetry, maintaining the posture of permanent press fabrics, holding the colors of upholstered furniture, and adhering carpets to their backing. Formaldehyde was first incorporated into engineered woods at the turn of the 20th century and became a staple component of domestic air following the post-WWII housing boom (Ore 2011). By current estimates, upwards of 98 percent of new homes (up to 5.5 years old) maintain indoor formaldehyde levels capable of inducing irritation (Offermann 2008). Elevated domestic concentrations of this chemical are commonplace from readily affordable mobile homes (Hanrahan et al. 1985; Sexton et al. 1989; Liu et al. 1991) to high-end and tightly sealed "green homes"<sup>9</sup> (Kincaid and Offermann 2010) in California's Silicon Valley. This study of chemical exposure in the FEMA trailers is not merely an example of post-disaster negligence, but a case study for understanding dwelling with chemicals as a larger, yet largely unstudied, American phenomenon.

Toxicological and epidemiological research is increasingly demonstrating formaldehyde's harm to humans. The National Toxicology Program recently classified

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<sup>9</sup> 'Green homes' is a common American shorthand for more energy efficient homes. Energy efficiency is often achieved by reducing thermal exchange between the inside and outside of the home. When more tightly sealed homes are not equipped with added ventilation chemicals can accumulate in the indoor air.

formaldehyde as a known human carcinogen (NTP 2011).<sup>10</sup> The chemical is further linked to increased incidents of asthma, particularly in children (Rumchev et al. 2002, McGwin et al. 2010, Dannemiller et al. 2013). Many more of the symptoms of formaldehyde exposure do not crystallize into discrete diseases and manifest sub-clinically as chronic fatigue, headaches, diarrhea, upper respiratory irritation, and memory loss (Tong et al. 2012).

Despite recent progress in apprehending the effects of chronic, low-level domestic formaldehyde exposures, a much longer history of the technical dismissal of indoor air quality-related illnesses haunts medical, legal, and regulatory understandings of everyday toxins (Murphy 2006, Nash 2006). Exposure science has historically focused on acute high-level industrial exposures at the expense of more pervasive, ongoing, less concentrated, and domestic exposures. Even in the workplace, lay attribution of symptoms to the chemical constituents of indoor air has been parried by diagnoses of psychosomatic disorders (*cf* Ryan and Morrow 1992).

The durative timeline of chronic exposures, individual variability in susceptibility, and sometimes-delayed effects affords not only the failure of scientific apprehension but also incongruence with larger rubrics of narrativization and intervention. As Rob Nixon, a scholar of environmental writing, explains:

Chemical and radiological violence, for example, is driven inward, somatized into cellular dramas of mutation that—particularly in the bodies of the poor—remain largely unobserved, undiagnosed, and untreated. From a narrative perspective, such invisible, mutagenic theater is slow paced and open ended, eluding the tidy closure, the containment, imposed by the visual orthodoxies of victory and defeat. (Nixon 2011: 6)

The parameters of scientific imperceptibility are nested within cultural orthodoxies ripe for anthropological analysis. Elizabeth Povinelli's recent work on the relationship between

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<sup>10</sup> See pages 139-140 for discussion of activist responses to this announcement, which came in the middle of my fieldwork.

increases in chronic morbidity and regimes of eventfulness can help unpack a lack of scientific attentiveness to uneventful everyday exposures. Povinelli demonstrates that in the contemporary United States and much of the neoliberal world, “making die, letting die and making live are organized within and through a specific imaginary of the event and eventfulness” (Povinelli 2011: 134). Slow, agentless exposures are less likely to inspire public and scientific concern, as are the ongoing sub-clinical illnesses that result from such exposures.

The thresholds of the home, thresholds of admissible exposure, and thresholds of eventfulness are all explicated in this thesis in order to fill the gap between experiences of illness and expert appraisals. From flame-retardants to the mycotoxins produced by mold, the potential contaminants of indoor air are manifold and extend well beyond formaldehyde. But as indoor air chemists attest that formaldehyde is the most common and most toxicologically understood indoor air pollutant (Salthammer et al. 2010: 2537), this chemical vapor is a gateway to understanding everyday domestic exposures.

There is an increasingly nuanced social science literature on the lived experience of chemical contamination. These studies are largely sociological in nature and predominantly focus on US toxic incidents. Chemical exposures began to emerge as a topic of sociological investigation in the 1980s alongside the rise of “environmental justice.” The environmental justice movement charged the existing environmental movement with an awareness of the disproportionately high environmental burdens and low environmental benefits reaped by minorities, the lower classes, and the disempowered—an attentiveness to the knock-on effects of power disparities informed by the civil rights movement.

Over the years, an initial focus on how fence-line communities in the northeastern US grappled with air and water contamination (Levine 1982, Edelstein 1988, Brown &

Mikkelsen 1997) opened up to include similar afflictions in southern US (Bullard 2000, Allen 2003, Lerner 2005, Singer 2011). Theoretically sparse, these texts largely focused on documenting how ordinary people make do in the face of what Auyero and Swistun (2007) would later dub “environmental suffering,” and how the political economy perpetuates exposures. A common thread across these texts is chronicling how affected residents mustered evidence of environmental health problems by organizing (or failing to organize) themselves, collecting citizen-science data, or collaborating with scientists. In the last decade, chemical exposure related research grew to include multi-sited comparisons of exposure (Lerner 2010), multi-sited accounts of building health movements around the contested illnesses that result from exposure (Brown et al. 2012), and the science of gene-environment interactions (Frickel 2004, Fortun & Fortun 2005, Shostak 2013).

During this period anthropologists enlarged the geographical remit of such studies to include Argentina (Auyero and Swistun 2009), Japan (Kirby 2010), Hong Kong (Choy 2011), China (Lora-Wainwright 2013a), and Senegal (Tousignant 2013). The most discernible vein of anthropological research on chemical exposure involves a chorus of attention focusing on the detection of chemical exposures via olfaction (Auyero and Swistun 2009, Brant 2008, Fletcher 2005, Jackson 2011, Reno 2011). However, the data I present in the last chapter contradict this consensus and suggests that we look to more diffuse sensorial practices—particularly attunements to minute harm—for a robust understanding of somatic chemical apprehension. Additionally, to my knowledge, this study is the first non-locality based ethnography of chemical exposure. As will be addressed in the following section, these low-dose and spatially scattered exposures often resist existing modes of conceptualization across scientific, policy, and public spheres.

## Writing the Uneventful Disaster

In Don DeLillo's 1985 novel *White Noise*, dinner conversation at the narrator's small-town Midwestern home always turns to the spectacular disasters witnessed at a distance that day on television. As the narrator's wife, Babette, remarks one night:

Every day on the news there's another toxic spill. Cancerous solvents from storage tanks, arsenic from smokestacks, radioactive water from power plants. How serious can it be if it happens all the time? Isn't the definition of a serious event based on the fact that it's not an everyday occurrence? (DeLillo 2011 [1985]: 201)

Their jaded, over-studied, and prematurely balding teenage son, Heinrich, responds incisively while plowing his steak through a mound of mash potatoes and gravy. He warns that it is not the increasingly normalized phenomena of chemical accidents that his mother should be worried about. Rather, the low-dose exposures of ordinary domestic American life are a much more likely source of enervation or illness: "forget spills, fallouts, leakages. It's the things right around you in your own house that'll get you sooner or later" (ibid: 202). The narrator's first impulse was to strike down his son's perturbing statement on the grounds of uncertain science. He recounted, "I wanted to tell him that statistical evidence of the kind he was quoting was by nature inconclusive." He then shifted from refutation to acquiescence, "I wanted to say that he would learn to regard all such catastrophic findings with equanimity as he matured," before settling on simply changing the subject with the unspoken help of his wife. The conversation soon meandered into a well-worn rut of family chitchat and a worrisome facet of everyday life receded into the background.

As tacitly revealed by Babette in the context of toxic exposure, an inverse relationship between frequency of occurrence and the perceived seriousness of events cultivates an air of ordinariness around chronic harms. Over time, errant chemicals and fugitive emissions cease

to become aberrational events worthy of liberal empathy (Povinelli 2011: 4) and become regular episodes, instantiations of ingrained processes and “occasions that frame experience while not changing much of anything” (Berlant 2011: 101). Spectatorship of disaster from the safety of the family TV room has become a right of modern citizenship (Azoulay 2012: 2), but when the *source* of harm—and not just its spectacular representation—crosses the threshold of the home it ceases to be a topic of polite dinner conversation. That is, proclamations like Heinrich’s assertion, “It’s the things right around you in your own house that’ll get you sooner or later,” hang heavily in the air before the conversation is changed. Chemical contamination that seeps from the very things that give domestic space its comfort and security does not breach the bulwarks of eventfulness and necessitate intervention but exists beyond popular imagination and cultural scripts.

If the disaster, as Blanchot (1995) insists, is what resists writing despite its dramatic eventfulness, how then can the lowly and invisible yet potentially disastrous elements of mundane life gain form, traction, and be written? This thesis approaches this question of apprehending and theorizing the dispersed and ordinary instruments of domestic harm both materially and affectively. The ‘disaster’ of this thesis is doubly distributed. The trailers are *spatially* distributed as they were deployed, recalled, and then resold. Their harm is *temporally* distributed as formaldehyde gradually off-gassed into domestic space over the course of almost a decade.

My first task was to follow trailers to establish a “social biography” of these mobile residences (Kopytoff 1986). This method of social analysis, which involves “tracing the circulation through different contexts of a manifestly material object of study” (Marcus 1995: 106) has largely found its success in the field of science and technology studies (*cf* Latour 1993: 64, 96) and art (Myers 1991, Marcus & Myers 1995). Despite provoking much

anthropological excitement at the end of the 20th Century, Appadurai's (1986) method of focusing on the "social life of things" catalyzed little empirical advancement outside of these domains.<sup>11</sup> As David Graeber teases:

while there's undoubtedly a certain charm to the fantasy that one could reconstruct, say, the entire history of a well traveled cassette or handgun or pair of tweezers, it would be a little like producing a list of everyone who's ever sat on a certain park bench: in the end you have to wonder what was supposed to be the point. (Graeber 2001: 33)

Graeber sets object-centered ethnography up as straw man, assuming that park benches are inert and that their distribution and duration of use are not caught up in the dynamics of class. He casts off the way in which bench designers craft their wares so that they only remain comfortable to people of various weights for specific periods of time. The encounters between humans and objects are much more complex, reciprocal, and socially informative than Graeber depicts, but his question—what is "the point" of following objects—warrants answering.

The point of tracking FEMA trailers is two-fold. The locations of their initial deployment and patterns of inhabitation illuminate how emergency infrastructure can cultivate a complex social dynamic that is spatially isolating while biosocially collectivizing. Analyzing the similarities between the disparate locations and situations of *resold* FEMA trailer inhabitants reveals the profound similarities between their original post-disaster residents and those currently calling them "home" across the country. Both iterations of trailer inhabitant are marked by profound housing crisis and more general precarity. The entanglement of distributed 'social' disasters and relatively concentrated 'natural' disasters is brought into focus by the material commonality of the FEMA trailer. The trailers have or continue to house Katrina survivors, those dispossessed by the foreclosure crisis, Native

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<sup>11</sup> Miller's (2011) study on the global production and consumption of denim is a notable exception.

Americans suffering from longstanding housing shortages, the elderly strapped for cash in retirement, and many others. The continuity—both materially and situationally—of housing-of-last-resort residents brings into crisp relief the relative privilege of ‘natural’ over ‘social’ disaster victims and the disqualification of ongoing distributed processes from imaginaries of emergency.

My second task was to understand how domestic chemicals become embodied and affect inhabitants. What I had assumed would be individuating and isolating processes of drawn-out illness proved to be aggregative processes wherein bodies and spaces were constantly pulled into relation with one another so as to push past the orthodoxies of perceptibility and make diminutive and durative exposures manifest. FEMA trailer inhabitants accumulated minute abnormalities of the skin, respiratory tract, cognition, and sleep patterns into heightened somatic and environmental literacies. In agreement with Rob Nixon, *apprehension* is a fundamental and multi-faceted term in the context of protracted and invisible exposure as it is “a crossover term that draws together the domains of perception, emotion, and action” (Nixon 2011: 14). Nixon, a professor of English, locates the writer-activist as his hopeful figure of toxic contaminant apprehension:

Writer-activists can help us apprehend threats imaginatively that remain imperceptible to the senses, either because they are geographically remote, too vast or too minute in scale, or are played out across a time span that exceeds the instance of observation or even the physiological life of the human observer. (ibid: 15)

While his larger project on toxic classism and the difficulty of apprehending chronic and invisible harm has enabled my own work, I take issue with his focus on the exceptional capacities of writer activists. What Nixon describes as apprehension is actually the receiving end of representations by the literarily charismatic. Such an understanding of apprehension

assumes knowledge of the environmental exposure that “exceeds the instance of observation or even physiological life of the human observer” and “requires rendering them apprehensible to the senses through the work of scientific and imaginative testimony”(ibid: 14). I found that both the spatial and temporal distribution of chemical exposure did not exceed the somatic and epistemological capacity of the exposed. As a result I posit that the power of apprehending exposure is not exclusive to magnetic activists, trailblazing scientists, or clever writers but rather is latent in our very ability to be affected by our environment.

I observed inhabitants of chemically infused homes attend to the minute sub-clinical aberrations in their physical composition—changes in one’s sense of taste, increased frequency of nightmares, decreased speed of cognition, loosening of the consistency of stool, minor rashes—to apprehend ongoing exposures in a process of aggregation I refer to as the chemical sublime. The chemical sublime is an alternative, and subtly widespread, schema of eventfulness that renders private, indistinct, chronic, and fragmented phenomena as significant and deserving of reverence. These practices of attentiveness to slight and subtle changes were employed by everyday people—from the rural working class to urban exposure scientists—and were not part of a capacity reserved for representationally gifted writer-activists (See Chapter 6).

The key to appreciating these mundane somatic, knowledge-making, and scalar practices is to shift one’s attention from conventional “empiricism of the senses” to “an empiricism of sensation” (Clough 2009: 51). Uneventful exposures do not primarily require imaginative recasting by writers, but an empirical attentiveness to how human bodies reveal conventionally imperceptible chemical exposures with their own wounding. However, this is not to say that writing does not play an important role in evincing the attrition of chronic, low-dose exposures. Indeed, the next section underlines the importance of evocative writing

in elucidating the full richness of the subject matter at hand. Writing is no doubt a vital process in the transmission of one's apprehension, but it plays a secondary role to detailed observation.

### **All that is Solid Melts into Air**

The air in the America mobile home is thick with *something*.<sup>12</sup> A heft that is more than the nitrogen, oxygen, argon, carbon dioxide, and other trace chemicals that populate our every breath and fill empty space. More than water vapor that drapes across humid summers. More, even, than the disconcerting quantities of formaldehyde leaching into domestic air and the airs of suspicion aroused or amplified by the chemical's real or imagined presence. As will become clear as this thesis progresses, indoor air and formaldehyde are caught up in larger atmospheres, landscapes, economies, and regimes of knowledge.

In what follows, currents of cultural poesis edge into ethnographic vignettes and, at times, jell into sustained accounts of life across the US. These discontinuous poetic filaments weave into the larger ethnography in a way that, following Kathleen Stewart and others, "tries to mimic [the] felt impacts and half-known effects" (Stewart 2005: 1016) of uncertain exposures and economies. In writing in this way I am not arguing that vaporous pollutants can only be understood by way of isomorphic representation because of the particular affordances of their form. Rather, I employ these figurative techniques to acknowledge that some aspects of my subject matter evaporate when approached head-on with conventional description or clinical dissective language. It is acknowledgement of the limits of traditional thick description and phenomenology's representational remit.

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<sup>12</sup> For an explication of "something" as a placeholder for irreducible ongoing crises, see: Berlant 1994: 138-141, 145.

While the active production of uncertainty or ambiguity can be outlined explicitly (see Chapter 2), particular features of the diffuse nature of gaseous formaldehyde, the moving target of the FEMA trailer, speculative economies, and forever-latent cultural forms require non-representational depictions (Thrift 2007) to be fully apprehended. A robust account of the social and cultural worlds of the FEMA trailers requires an understanding of the auras of their interior space and economy: it demands embodied stories, not sanitized narratives (Wikan 2000: 217). At times, analyses of the rawness of chemical injuries are intentionally undercooked. It would be wrong to judge such accounts as half-baked since it is their liveliness that is being cultivated. The use of formal devices of dissection ebbs. Assessments are minimized to reduce undue turbulence to the affective reflecting pools I aim to collect in the following stories. Beyond prose I employ a map that derives its significance from its indecipherability. The entire thesis is peppered with photographs.

This approach is a critique of standard modes of anthropological interpretation that aver a stability and coherence of meaning (Campbell 2008), that truth can be cleanly exhumed from the messy earth like potsherds (*cf* Law 2004). Such a critique surfaces here as explicit commentary, only to dissolve into the stories themselves: the selection of details, pacing, tone, and “words pressing into and impressed by the sensuousness of their referents” (Taussig 1992: 7). The form of writing is an alternative means of bringing the world into anthropological focus. It attunes to the form of the formaldehyde fog hovering in my informants’ lives. One could say that a portion of the academic work of this thesis becomes oxygenic, everywhere but invisible.

While still unconventional—especially within the social anthropology tradition—this attempt at bringing the reader affectively nearer to the field is not new. This emergent anthropological tradition is grounded in the work of the modernist avant-garde and Walter

Benjamin (2002), with their juxtapositions of material and conceptual forms, montage, collage, fragmentation, and resistance to narrativization. James Clifford & George Marcus (1986) and Michael Taussig (1992) were among the earliest champions of these experimental representational techniques for the use of anthropology. Benjamin's provocations, Taussig argues, "puts writing on a completely different plane than hitherto conceived. It calls for an understanding of the representation as contiguous with that being represented and not as suspended above and distant from the represented" (Taussig 1992: 10). Representations at a distance fail to convey the immediate, non-ideational sensuousness of lived experience and therefore fall short of full robustness.

The full-bodied means of representation that I seek in composing this thesis would also fall short if I forced a clean break between analytic and affective writing styles. Unlike Stewarts' (2007) landmark ethnography of middle class American affect that is fragmented, in the third person, and citationally sparse, the poetics and sensuous writing of this text are supplements to conventional anthropological tools. I move in and out of affective writing, as affect is only one of many layers of the subject at hand. To sustain this hybrid approach, this thesis employs multiple, and at times discontinuous, theoretical traditions to unpack the FEMA trailers and their world.<sup>13</sup>

### **Academic Work on the FEMA Trailers**

Despite accounting for the vast minority of FEMA trailer inhabitants, the small amount of social scientific work that exists on the FEMA trailers focuses almost exclusively on the more than 500 FEMA trailer parks. While 21,105 households were housed on these

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<sup>13</sup> Similarly Stewart drew an affinity with James Agee's nervous and shifting voice that moved between representational modes (1996: 22).

group sites, some 106,126 households received emergency housing units on their own property (GAO 2008: 61). FEMA trailer park residents likely became the focal point of research on the FEMA trailers as a result of the social currents that lie at the heart of this thesis, namely that spatially distributed and chronic harm fails to garner investigation, generate outcry, necessitate intervention. The trailer parks were spectacles of displacement, destitution, and abandonment long after the most-eye catching material debris had been cleared from the region. They were more easily surveyed or problematized than the larger constellation of FEMA trailers scattered across the region, on private property. What I find revealing about these studies is that they largely cast the extremity of controversy, woe, and illness of the group sites not as symptoms of displacement and FEMA trailer inhabitation in general, but as technical policy or political issues that are exclusive to emergency trailer parks. Such is the catch-22 of the event; situations that surmount thresholds of eventfulness often become extraordinary rather than indicative of an insidious element of the ordinary. Sublime events cauterize their ties to the everyday.

What follows is a brief tour of the literature on FEMA trailer parks and trailer parks more generally. Controversy descended upon the FEMA trailer parks before they even came into fruition. In the immediate wake of the storm half of Louisiana's 64 parishes passed local legislation banning new group sites in an effort to thwart an influx of displaced persons and the illicit activity associated with the transient. In a quantitative analysis of proposed versus actual group FEMA trailer sites, Aldrich and Crook found that "Those localities with more politically active and involved citizens who voted in past elections—a proxy we interpret as defining an area with stronger ties and a more vibrant civil society—were the ones which received the fewest trailers" (Aldrich & Crook 2008: 379). The study seeks to highlight the "paradox of civil society" in which active civic engagement does not only bolster post-

disaster rebuilding but may do so at the expense of nearby communities that would have been aided by FEMA trailers.<sup>14</sup>

Once the parks were established, housing policy experts quickly deplored the group site model, stating that the ghettoizing tendency of the FEMA trailer parks located far from essential and social services “epitomized everything that housing policy can do wrong for families” (Turner 2007: 1).<sup>15</sup> To avoid living in trailers middle- and upper-income owners of damaged homes entered the already depleted New Orleans rental market, increasing rent prices 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.

FEMA 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: w435-w436). 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 the parks but also the primary shortcoming; this absurdity of the FEMA trailers will be developed throughout the thesis. The study also documented high major depression, suicidal ideation, and suicide attempt rates in these communities.

The Children’s Health Fund provided pediatric care to Renaissance Village—the

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<sup>14</sup> Examining the same data, Davis and Bali found statistically significant predictors of trailer park refusal in addition that of Aldrich and Crook. They aver that sites were more likely to be proposed in areas with larger black populations. Further, communities where local politicians were up for reelection were twice as likely to reject proposed trailer parks as those not approaching the ballot box (Davis & Bali 2008).

<sup>15</sup> 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 of 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 and ridership was sparse (GAO 2008: 4).

largest and last to close group site—with a mobile medical and mental health unit.<sup>16</sup> A review of 261 charts of patients treated from 1 January to 30 September 2008 found that 42% were diagnosed with allergic rhinitis and/or upper respiratory infections and 24% had a cluster of upper respiratory, allergic, and dermatological diagnoses, which, they hazard, may stem from FEMA trailer formaldehyde exposure (The Children’s Health Fund 2008: 13-14). Annual household incomes averaged, \$5,000, well within the remit of “profound poverty.” Among children under four years of age, the study found an iron deficiency anemia rate of 41%. This rate is twice that of children in New York City’s homeless shelters and “by far the highest yet documented” in the US (ibid: 12).

Adding to the isolation of trailer parks inhabitants, the parks and their residents summoned widespread stigma. Baton Rouge, located 80 miles northwest of New Orleans, is the seat of state government and became the home to the most concentrated cluster of FEMA trailer parks. Thirteen such parks were established in and around Baton Rouge, including the most infamous group site, Renaissance Village. A phone survey of 1,300 residents of East Baton Rouge parish in late 2005 and then again in mid-2006 found 57% to 61% of residents harbored negative perceptions of the parks and, by virtue, their residents (Lee et al. 2007).

As is well known, the unfavorable perception of trailer parks is not limited to those made up of FEMA trailers. This stigma dates back to the 1930s when the pressures of the great depression pushed low-income retirees and migrant workers into trailers, which they used as permanent housing. Previously trailers had been solely used as temporary vacation housing (Miller and Evko 1985: 684-685). Since then, the financial savings of such low cost residences, which allow those with more humble incomes access to the housing market, have been met with the social costs of being relegated to marginal land and ascribed overt and

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<sup>16</sup> Renaissance Village park housed 1,600 residents at its peak.

covert stigma (Wallis 1991, Edwards 2004). In the late twentieth century, the number of post-agrarian rural communities increased steeply (Castle 1995), de-coupling rural living from the institution of farming, and shifting rubrics of rural social status from an emphasis on family reputation to that of residence location and conspicuous consumption (MacTavish 2007: 75).<sup>17</sup>

Although first recorded in the 1950s (Irby 1999), the term “trailer trash” solidified during this period in which the mobile home park became a significant rural community form (MacTavish & Salamon 2001). While there is relatively little scholarship on the term “trailer trash,” a great deal has been written on the larger umbrella term “white trash.” Summarizing the vast white trash literature Margarethe Kusenbach writes, “this term is most often used by Whites in order to distance themselves from other Whites whom are feared and despised because of their economic and physical proximity to minorities” (Kusenbach 2009: 402).

Illustrating the similarity between the general form of trailer park discrimination and FEMA trailer prejudice, those that would likely have to live in a FEMA trailer if a similar disaster befell their home were less likely to have stigma-related views of the FEMA group sites (Lee et al. 2007: 754) and whites that lived near FEMA trailer parks were more likely than other racial groups to float the idea of selling their homes to avoid trailer proximity (ibid: 758). Just as the stigma of FEMA trailer residency is locked into relation with rural social worlds, the FEMA trailers themselves, upon their resale, were redistributed to the various rural and suburban locations across the country in which such negative social values originally developed.

## Methods

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<sup>17</sup> The history of mobile homes as related to housing crises and American ideals of home ownership is woven into Chapters 4 & 5.

My research methods were designed to capture the diversity of social worlds shaping and shaped by the FEMA trailers. The trailers were very much a moving target and required a multiplicity of perspectives to unpack their significance. The primary data that lies at the foundation of this thesis are interviews and conversations with 96 informants spanning six different informant categories: inhabitants of FEMA trailers after Katrina and Rita (thirty-five), inhabitants of FEMA trailers as resold across the US (forty), FEMA trailer resellers (nine), inhabitants of other mobile or modular homes that complained of indoor air quality (five), scientists working on indoor air quality (five), activists/advocates (three), FEMA Personnel (two).<sup>18</sup> The average interview duration was between 45 minutes and an hour and a half although many engagements spanned days or years and were accompanied by follow-ups conducted over the phone or via email. The majority of interviews were audio recorded and transcribed. Beginning in August of 2010, I was based in New Orleans for 18 months and then in rural Mississippi for 6 months.

I attended trailer auctions, visited FEMA trailer staging areas, paid visits to 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 new homes hundreds of miles from the coast—as far afield as Massachusetts—and in hospital beds. A month of participant observation as a law clerk at the office of a plaintiff attorney in the FEMA trailer formaldehyde product liability litigation

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<sup>18</sup> One of the activists was also a former FEMA trailer inhabitant in Mississippi. One former FEMA trailer inhabitant worked for FEMA. One post-Katrina trailer inhabitant was also a resold trailer inhabitant. I had passing encounters with at least sixty more inhabitants of potentially contaminated homes.

provided a first entry point to my ethnographic work.

In addition to participant observation and interviews I consulted thousands of pages of affidavits, deposition transcripts, medical records, and other legal documents. I wrote half a dozen Freedom of Information Act letters to federal agencies requesting data on both the original deployment and the resale of the FEMA trailers. The methods necessary to track FEMA trailers as they were sold across the country grew to be both collaborative and elaborate and will be described in detail in the Re-Staging Area.

I came to these methods by taking seriously Kim Fortun's charge to engage with multiple strata of data (Fortun 2001: 6). I push Fortun's methodological insights into my techniques for representation, described in the previous section. I shift between brushes with affective registers that resist the violence of full dissection, standard analytic modes, and cartographic depictions that gain their insights from poetics.

I found informants in New Orleans from a variety of means. New Orleans had been a hotbed of social science research for the half-decade between the city's inundation and my arrival. The first interviews I conducted were of individuals introduced to me by key activists. All of these individuals had previously been featured in the media or in activist campaigns and I was worried that the easiest to find informants would simply deliver canned narratives and populate my work with what Kaushik Sunder Rajan has called "serialized natives" (2013). I then diversified my approach to finding informants to include a variety of means: from the tried-and-true avenue of non-governmental organizations, to the network cultivated by accepting a job teaching college credit bearing classes in New Orleans public schools, exercising my larger social network, and going door-to-door at remaining suburban and urban trailers. Collaborating environmental activists and investigative reporters pulsed their networks to introduce me to people with stories to tell. Participant recruitment at times

exceeded my own intentionality as an unknown person advertised my study on a community mailing list and multiple informants approached me out of the blue, having heard of my interest in the FEMA trailers via word of mouth.

My baseline ethnographic objective of assembling a detailed composite of life in the FEMA trailers after the storms of 2005 proved to be the most challenging and least successful aspect of the project. Finding a representative sample of people who had lived in trailers was not a problem. The region was still overflowing with trailer stories when I arrived. I would encounter brief tales of trailer life even when not seeking them out: while buying lunch in the 7<sup>th</sup> Ward, nosing through a yard sale in Metairie, teaching a class in the Orleans Parish Prison, helping install an art exhibition in a warehouse in the Bywater neighborhood, or exploring the bayou in Plaquemines parish on the boat of a friend of a friend. The problem was finding individuals who would reach back into their memories and bring FEMA trailers from a background structure to a foregrounded object of reflection. As discussed in detail in chapter three, the multiplicity of post-disaster struggles made it difficult for interlocutors to isolate memories of the trailer itself beyond cursory comments on its smallness, unsettling air quality, and poor craftsmanship. Most trailer residents I met were hesitant to revisit their turbulent trailer memories that they had worked so hard to let go. After a brief rundown of their daily life, informants would get increasingly resistant to my questions. Their faces read, “What else is there to say? It’s over now.”

The current re-use of the FEMA trailers allowed me to compensate for the empirical opportunity lost by entering the field as my object of study was largely disassembled. My oral history of life in the trailers after Katrina and Rita remains, to an extent, disembodied as it lacked the ethnographic purchase of participant observation. But what the first chapter lacks in observed practices of trailer inhabitation after the storms, the fourth chapter makes up for

in a detailed chronicling of domesticity in resold FEMA trailers across the country. While spending time in these trailers I too would develop slight and repeated aberrations in my physical wellbeing, from headaches to fatigue and insomnia. In chapter six the illnesses of my informants are underlined by my own embodied responses to the indoor air of the FEMA trailers. I leverage what the American philosopher William James has called ‘radical empiricism’ (James 2010 [1912]), to bear corporeal witness to the attritional atmospheres of the FEMA trailers.

## **Overview**

The dissertation unfolds chronologically and in terms of geographic scale. The first chapter introduces the central figure of the dissertation, the FEMA trailer, and the logics of citizenship that triggered its commission and deployment. The chapter leverages both phenomenology and the poetry of Emily Dickenson to comprehend the affects of FEMA trailer life that pulled inhabitants into new and short-lived modes of relationally that revolved around dysphoria and illness. A primary sinew of connectivity between these diminutive mobile homes and their human inhabitants is the invisible and contested actor of embodied formaldehyde. Chapter 2 explicates the socio-technical processes through which connections between the FEMA trailers, formaldehyde, and negative health outcomes were evaporated by federally funded studies and, later, in the courtroom. The un-knowing of exposure and related illnesses involves both the active subjugation of knowledge and less willful forces such as pharmaceutical reasoning, ethical remits, and divergent enactments of complex diseases.

The scope of the third chapter expands out, from the previous chapter’s focus on the technical aspect of legal proceedings, to unpack the expectations of the plaintiffs in the FEMA trailer formaldehyde litigation. Far from a hopeful instance of “biological citizenship”

(Petryna 2002), exposed FEMA trailer residents evacuated any hope of survival or re-negotiating the entitlements of citizenship well before a miniscule settlement was reached. The chapter explores the multiple forces informing the subjectivities of the chronically exposed, from neoliberal conditioning and the disadvantageous structure of tort law to the traumatic tense of affliction as the exposed anxiously monitor the harms of the past-becoming-present and do not hold out hope for future monetary or legal gains. The litigation and embodied effects of exposure extend far beyond the original deployment of these emergency housing units. At this point in the chronology of the FEMA trailers (2007-2010), the federal government had reclaimed all but a handful of these homes. The trailers were towed en mass back to the staging areas where they had been delivered at the outset of their mission. The trailers were re-staged and prepared to be resold. In the Re-Staging Area, I outline the logistics and logics of the resale of the FEMA trailers and the methods used to track these trailers across the country, which involved collaborations with other anthropologists, analytical chemists, an industrial hygienist, and a journalist.

Chapter 4 begins by unpacking, what one informant calls, the “dada” practices of federal policy that regulate the inhabitation and resale of the FEMA trailers. These government frameworks serve as the conditions of possibility for the surreality of FEMA trailer domesticity. Life in the FEMA trailers is marked by dysfunctions of both the material structure of the home and the biological composition of its inhabitants. FEMA trailer residents inhabit an ordinary between prevailing expectations of the domestic as a fortifying space and becoming ensconced in the everyday attrition of chemical off-gassing, electrical short-circuiting, and structural decomposition. This chapter explicates the chronically liminal ordinariness of FEMA trailer inhabitation best described as an enduing surreality. The fifth chapter takes a step back to unpack the market currents of the FEMA trailers’ resale,

highlighting the ways in which the trailers are indicators and agents of dispossession and precarity.

Chapter six scales-up to include other forms of toxic domestic spaces including non-FEMA trailer manufactured housing and high-end “green” homes. I document how residents of toxic homes attend to the minute, gradual, and ongoing symptoms of exposure to discern the reality and magnitude of residential contamination. While the anthropological literature maintains a consensus that scent is the primary means of invisible chemical apprehension, I found scent—and particularly the alluring sent-concept of the ‘new car smell’—to entice individuals into exposure. I suggest that the body of the exposed is both an epistemic instrument and, across time, the means of making low-level, chronic, and cruddy chemical exposures into eventful instances that drive individuals to action.

## CHAPTER 1

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### **Illocality:**

### **Emergency Housing, Sick Space, and Distributed Architecture**

Attritional catastrophes that overspill clear boundaries in time and space are marked above all by displacements—temporal, geographical, rhetorical, and technological displacements.  
—Rob Nixon (2011: 7)

A thick chain, unwavering in the slight breeze, dangled from the live oak branch above us. As we sat in folding chairs facing the street, he looked up into the tree and noted that he used to feel up to tinkering with cars—pulling engines out with the metal rigging above. It's been years since he felt well. For the past five years, he, his wife and their daughter have been living in a 21-foot long travel trailer in the mid-city neighborhood of New Orleans. Their trailer and almost 120,000 nearly identical trailers were issued by the Federal Emergency Management Agency (FEMA) to those left without a habitable home after hurricanes Katrina and Rita in 2005. His trailer lay jacked up on cinderblocks to our left and was suspected of making his family sick. 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, their upper airways were constantly inflamed. Bronchitis, chronic fatigue, nasal congestion, insomnia, and eye irritation 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 Sever

Cold & Flu, 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 window sills and doorframes were lined with the small card-stock boxes of over the counter medicines. Plastic pillboxes were stuffed between the cushions of the standard-issue couch. An asthma inhaler he said was prescribed last week lay on the TV and an empty foil tray of decongestant tablets sat atop dirty paper towels and unwanted coupons in their trashcan.

After the destruction of their rented suburban home and upon moving to the city and placing their trailer on a church friend's vacant lot, they struck up friendship with their new trailer-residing neighbors. Old friends scattered across the region and new neighbors were all living in FEMA trailers, many of whom also began to suffer from similar maladies. "We communicated a lot." He recounted, "So ya know, therefore, when they went to the doctor they would tell me what's going on with 'em and what medicines they picked up." Together they 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 was taken as revelatory of the collective's plight. Their uniform homes synchronously patterned their days—forcing them out during the high off-gassing periods of the early afternoon—and aligned their maladies, bringing their bodies into a near (dysfunctional) unison. This chemical and architectural reshaping of inhabitants' ways of being in space with others lies at the center of this chapter. This patterning of the non-geographically fixed and sick space of the trailer, which I refer to as an "illocality," will be returned to and fleshed out in due course.



**Figure 1.1 Unoccupied FEMA trailer interior. Top: View through front door, master bedroom door on the right. Bottom: Kitchen/dining/living room view, bunk beds, bathroom, and some storage beyond curtain.**

The gold caps on his incisors were wearing away, revealing clean white ellipses of bone. Between stories of life in the trailer he would shake his head and run his tongue across his teeth, under his lips. I wondered if it was possible that he had slowly licked away the gold over the last few stressful years. Things used to be different. He used to be a pastor, with a congregation of 250. He used to rent a house in a relatively affluent suburb. He used to be 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 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 white, albeit outdated, Nikes. Much of his congregation never returned from evacuation. Any tithe collected from those that had returned went to buying school materials for the neighborhood children or keeping the lights on for elderly members of the church.

I only saw him twice for a period of hours. When I last saw him, in May of 2011, he sat under the live oak tree. Two letters lay on the grass in front of him, pinned beneath his sneakers. One 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 resided in one of only a handful of trailers left in the city. New Orleans was trying to move on. The last of the emergency hiatuses of established law were being disassembled.<sup>19</sup> Press covering the forced exodus of the last remaining FEMA trailer inhabitants evoked polarized sentiments. Some chided those still in trailers, labeling them lazy free-loaders past due for the boot. Others admonished the move as an anti-poverty policy. All he knew was that he didn't know where he was going to go. "It is severe. It is *severe*. It is **severe**," He repeated and anxiously licked what was left of his gold. Fire ants tweezed at my feet. 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 his forced departure. As we

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<sup>19</sup> 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 23,000 FEMA trailers in New Orleans) because they 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).

agreed, I texted him the name and number of a willing attorney. A month later he texted back, “They forced us out.” I was unsure what to feel.

The walls of the FEMA trailers played multiple roles in this post-disaster landscape. These particleboard walls were charged with the task of restoring the spatial grammar of a disfigured region, of sorting out ruins from residence, of holding back the chaos of catastrophe. Yet these same walls were also found to be the source of potentially toxic formaldehyde off-gassing (Maddalena et al. 2009, Murphy et al. 2013). Although deployed as a divider, these walls, as a result of their formaldehyde-based setting agents, united FEMA trailer inhabitants scattered across the Gulf Coast as they collectively searched for the causes of their mysterious ailments. While much of the suffering of trailer life led to the further isolation of trailer inhabitants, the environmental illnesses and spatial frustrations experienced in the FEMA trailers spurred a countervailing tide of connectivity that brought residents into new, reformed, or reinvigorated networks of communication.

Walls are an organizing figure of this chapter. Compromised levees and water damaged residential walls gave rise to the deployment of the FEMA trailers. Simultaneously, these walls discharged both general feelings of dysphoria—in terms of their uniformly cramped interiors—and chemicals that cultivated a variety of illnesses. In a very material sense, walls connect the sensations, sociality, and spaces documented here in.

The argument of this chapter is in sharp distinction to the scant anthropological studies that make reference to the social effects of post-disaster emergency housing. The most sustained of these is a handful of pages in Kai Erikson’s canonical sociological portrait of the 1972 flooding of Buffalo Creek, *Everything in Its Path*. Erikson views the mobile homes parked in Buffalo Creek by the federal government after the flood as agents of community

disorganization, solidifying displacement and fostering alienation. His informants complained of their size—although they were many times larger than the average FEMA trailer—and referred to them as “concentration camps” (Erikson 1976: 148-152).

FEMA trailers, particularly those placed in FEMA trailer parks, muster a similarly bleak description as sites of condensed distress. 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 US baseline levels (Larrance et al. 2007). The cramped space of the trailers ignited arguments. Lovers broke up. Siblings fought. Thin walls allowed for the broadcasting of domestic disputes to neighbors. Audio awareness to the private life of the nearby made stress feel almost contagious. Trailer parks lacked spaces for public congregation. Finally, many argue that the presence of security staff “blurs the line between prison and community” (Passavant 2011: 110).<sup>20</sup>

The thesis pertaining to the original deployment of the FEMA trailers—that these diminutive mobile homes crystallized a sinew of connectivity between their human inhabitants—is not intended to refute the fragmentation of life in the trailers but rather to contribute an additional and vital nuance to the anthropological record. In making this argument I hope to demonstrate a way in which the built environment shapes biosociality (Rabinow 1996) and provides the experiential grounds for shared affects (Navaro-Yashin 2012: 179).

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<sup>20</sup> The security of these trailer parks was often lamented by outside reporters (*cf* Goodman 2006), but Ray, introduced later in the chapter, was quite happy about the presence of security 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 trailer 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 trailer built to FEMA specifications utilizes three different types of lock; each type of lock has 51, 100, or 200 unique keys. So in a FEMA trailer park of 200 identical trailers a single resident would likely be able to open 1 to 4 of the other homes in their park (Engber 2006).

## **Broken Walls and Spatial Citizenship**

The man whose account began this chapter was not alone in displacement, in chemical exposure, in illness, and in the search for permanent housing. After the storms, some 300,000 Gulf Coast residents lived in FEMA trailers. The disaster reordered life and landscape at a magnitude that is difficult to conceive. Over one hundred 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 towards the Gulf Coast.

With few alternatives, the walls of the FEMA trailer were entrusted with the gargantuan task of reinstating the spatial syntax of the Gulf Coast. They were charged with the mission of separating ruins from residence, of carving out little pockets of order from the chaos of mass destruction. The very deployment of the FEMA trailers is caught up in larger imaginaries of privacy, citizenship, and belonging. The section briefly unpacks how citizenship is entangled in the space and functionality of the home—a process which made the FEMA trailers a politically necessary intervention. It also explores how the absence of an intact home is often registered by way of visceral feelings, or affects.

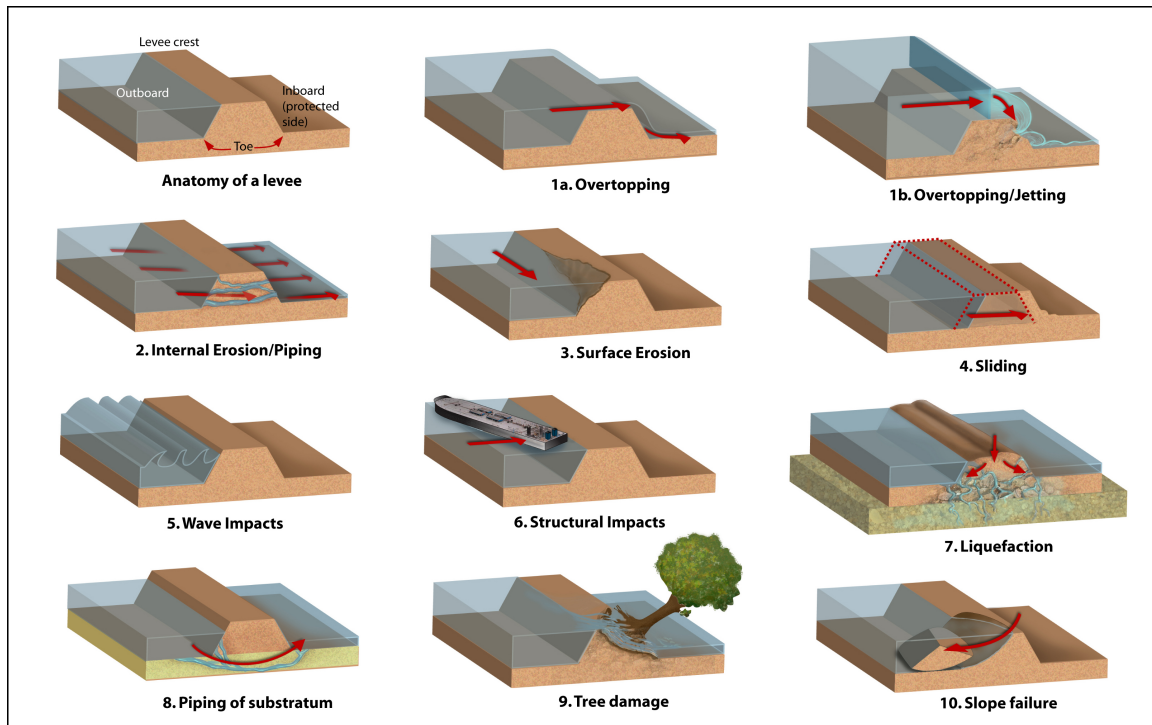
Spatial upheaval was at the center of the devastations wreaked upon the Gulf Coast in 2005. In late August of that year Hurricane Katrina made landfall on the coast of Louisiana, sending a storm surge up a man-made shipping channel and into the flood protection system of New Orleans. The Hurricane swung east and leveled many areas in Mississippi, even upending houses in Southwestern Alabama. As the levees breached—more by structural

insecurity than by meteorological force (Seed et al. 2006)—so too, I argue, did the full-fledged citizenship of many New Orleanians.

In describing the spatial quality of citizenship, Hannah Arendt (1998 [1958]) observed that historically the outer walls of the city were intimately entwined with the laws of the city, and that within the city the walls of the home bound enclaves of domestic autonomy. As she elaborates, “the one harbored and enclosed political life as the other sheltered and protected the biological life process of the family” (Arendt 1998 [1958]: 64). The space within the walls of the city afforded a secure venue for democracy. The home cultivated democracy’s prerequisite—human life itself—and a withdrawal from constant political exposure. Citizenship was enacted in public, but it was rooted in the seclusion of the home and, she warns, “to have no private place of one’s own (like a slave) meant to be no longer human” (ibid). In the foundational space of the home, Arendt argues, citizenship becomes entangled with the bedrock of humanity.

Arendt’s observations are specifically centered upon the city-state of antiquity, yet are surprisingly relevant to contemporary phenomena. Wendy Brown has noted a recent upsurge in national border-wall building in the United States and across the globe, which she views as performative assertions of sovereignty (Brown 2010). Such an observation of the continued relationship between the materiality of walls and the quality of the political fields they demarcate alludes to the sustained applicability of Arendt’s reflections on the city-state to that of the nation-state. My invocation of Arendt in the context of New Orleans is also potentially conflating because levees of New Orleans do not align with national or municipal boundaries. Yet, the levees do furnish the possibility of human life in a city that is virtually surrounded by water, fifty percent of which lies below sea level. The levees carve out sovereign space from ‘nature’ in much the same way as border walls do from other nation-

states. New Orleans' levees and national boundary walls maintain a functional equivalence in terms of maintaining territorial sovereignty.



**Figure 1.2 Types of Levee Failure in New Orleans. Image by Zina Deretsky, May 2006, National Science Foundation.**

What I take from Arendt is the general understanding that the most basic of societal orders were—and I assert still are—held in place by architecture's most elemental form: the wall. The material partitions of the built environment delineate and constitute the domains of social and political life, furnishing an “interdependency that equates built and legal fabric” (Weizman 2007: 210). Applying this rubric to make sense of the case at hand, we can see that with the physical compromise of New Orleans' levee system, and subsequently the walls of the home, came the spectacular compromise of their attendant juridical and humanistic functions.

The disaster unfolded on national and international television. News anchors, correspondents, and pundits began referring to those displaced by the storm as “refugees.” Many displaced people also began referring to themselves as refugees, while others deplored the word’s connotations. A national debate erupted on the applicability of the term (Pesca 2005; Masquelier 2006; Bergman & Sager 2008: 138; Whitehall & Johnson 2011: 63-66). ‘Refugee’ refers to a legal loss of citizenship, and in that sense, it does not apply to Gulf Coast residents. Yet, debates over the accuracy of the label miss how a quick turn to a technically unsuitable term is culturally revealing. Within Arendt’s spatial-material conception of citizenship the word implies that in the destruction of their homes, residents lost an essential foothold for participation in the body politic. The loss of four walls to ground themselves, and their rights, tacitly occludes citizenship’s spatial prerequisite. Such a situation warranted the technically inaccurate label of refugee.<sup>21</sup> As Arendt indicates, a “private place of one’s own” mediates subjects’ access to full-fledged citizenship. In this light ‘refugee’ holds cultural veracity, representing both the perceived and lived debasement of Western citizenship without a home.

It is telling that Vincanne Adams begins her recent book on the drawn out recovery of New Orleans with the following quotation from Caroline Reeves, a community Organizer, as she testified in front of the US Senate in 2007:

The depression has shifted from the storm to the hopelessness and stress of the Road Home.<sup>22</sup> Yes, it is that bad...A little girl came to volunteer with her mom from Boston. She was nine years old. And she asked her mother on the third day of working in [our community], “Mom, when are we going back to America?” [...] We are Americans. We are homeowners and

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<sup>21</sup> The use of the term ‘refugee’ was often inflected with racialized overtones by white commentators, implying a lack of belonging of black displaced persons and reading their mobility as menacing. While perhaps coupled with a pejorative use, I would argue that the spatial dimensions precede or enable the bigoted dimensions.

<sup>22</sup> The Road Home was a grant program administered by Louisiana Recovery Authority to provide funds to fill in the gap between insurance payouts and the assessed value of destroyed homes.

we pay taxes and we are citizens. My question to you is: when can we rejoin the country? (Adams 2013: 1)

Reeves highlights the inclusionary assets held by many of those still struggling to rebuild. They are legal citizens of the United States. They have achieved a credit rating high enough for banks to finance their mortgage and attain homeownership, which is vital for first-class citizenship in the US (Perin 1980). They are in good legal standing with the Internal Revenue Service. Yet, the nine-year-old Bostonian did not have to review documents to know that full-fledged America was something other than the block after block of blighted houses that surrounded her in New Orleans. The landscape that led this child to believe that New Orleanians was not American soil was a landscape of unlivable homes. Residents' legal entitlements meant very little without the material baseline of a home. This spatial-material dimension of citizenship and belonging was not just affectively observed from without.

In order to access federally subsidized rebuilding funds, displaced Louisiana residents navigated a set of bureaucratic procedures that Adams characterizes as "byzantine." "Living in FEMA trailers without computer, mail, or legal assistance," Adams notes, "homeowners were submitted to a paperwork scrutiny that some compared to the process that they imagined foreigners had to go through to get citizenship in the United States" (2013: 77). Applying for home rebuilding assistance *felt* like applying for citizenship, not just because of labyrinthine bureaucracy but because the home is the primary footing of, as Kath Hulse and Violet Kolar (2009) put it, one's "right to belong." Citizenship, as an assemblage of "rights, responsibilities, roles, and resources that society offers through public and social institutions and informal 'associational life,'" is mediated through the home in the United States (Rowe et al. 2001: 15). It is both the home itself and the legal status of tenure that facilitates such community membership.

For example, in 2009, New Orleans blues singer Benny Maygarden released a song entitled “Gutted.” The song chronicles the death of his mother, his wife leaving him for a roofing contractor, and plays on the similarity between his chronic feelings of evisceration and the status of his home. Like all of the water-damaged homes along the Gulf whose owners had aspirations of rebuilding, Maygarden’s home was stripped to its most basic structure, a process known as “gutting” and often carried out by volunteers:

Three days on the roof and two years in this trailer and I’m gutted. I’m still gutted. Well I ain’t moved back in [...] my house got cleaned up by college kids from up north. Now its just studs and a roof, but what that is worth? I’m gutted.

For Maygarden there is no distinction between his disposition and the material state of his home. *I’m gutted*. This simple line concisely summarizes the affects of a city made up of disemboweled homes. Towards the end of the song he sarcastically exclaims, “this formaldehyde is the only thing keeping me alive!” Read in the inverse, as his ironic tone implies, domestic chemical exposure was the last straw, a near crippling blow after a succession of hardships. Molecules of formaldehyde leeching into the air of his temporary housing unit were microscopic agents that, little by little, pushed him towards death.

## Deployment

"Thank God," she whispered to herself as she drove down Jackson Avenue and saw FEMA trailers being hauled into the front yards of her neighbors. "They [her neighbors] are coming back."

—Elderly resident of Central City

We were just so happy to be back and have a place to stay, next to our houses. So in a way it was a little bit festive at first... It got old pretty quick.

—Middle-Aged Resident of Holy Cross

After the storm, New Orleans lay almost entirely vacant for months. In the home of one informant the slight ridges of a freshly vacuumed carpet lay wholly intact on the second floor, while the refrigerator on ground level had disappeared through the wall. Rubble lined the streets and soon overwhelmed local landfills. Mold hunkered down 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. The State Department of Economic Development established an Early Return Program and issued trailers to those deemed essential to the recovery of the city.

Through this program a white architect in the relatively affluent Lake Terrace neighborhood, perched between City Park and Lake Pontchartrain, was granted early access to his property. Years later in the conference room of his Central Business District office, he described a blacked out city, “When I would go home at night I would drive through a totally dark city. There were no streetlights; there was nobody there. I was the only person on my block [...] I was the only trailer for months.” The architect tried to conquer the desolation and dread of the landscape by charging his life with a sense of adventure and charting his exploits on his trailer-centered blog. Many others holed up in their trailers, steeping in post-traumatic depression. 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 Holy Grove neighborhood recollected thinking to herself early in the recovery when strange and frightening noises would waft through the thin walls of her trailer at night. She was unable to work, overwrought by anxiety and depression. Similarly, a Central City man continued long hours of maintenance work but took to drinking alone in his trailer late into the night to subdue his melancholy. He was not depressed when he was housed in a Carnival Cruise ship—a much smaller living space—for a month prior to moving into his FEMA trailer.

A former resident of the Iberville housing projects, Marquisha, was 13 when she first moved into a trailer cluster just north of her former home. Upon seeing the trailer for the first time Marquisha had mixed feelings, “I felt happy but I was like, ‘this is going to cause confusion,’ like it was going to cause a lot [of tension] between the family.” Her sister, her brother, a cousin, her aunt, her mother and her father all shared the diminutive home with her. Mornings were particularly hectic. In addition to an oversubscribed bathroom and kitchen, as family members prepared for work or school an ironing board perennially blocked the trailer’s only exit. Trying to clamber over a hot iron proved to be too risky even for overeager students like Marquisha. Upon returning home from school she preferred to stay outside of 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 their 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 both in terms of surface area and severity. Despite her misgivings about the trailer’s size and air quality she did feel comforted by its walls. Her most vivid memories from her trailer tenure involve sprinting, on multiple occasions, to the trailer to seek shelter from nearby gunfire. Crime in the city spiked in the post-disaster bedlam and remains at a high plateau.



**Figure 1.3** Bullet holes in side of Terrence Vine's FEMA trailer. His brother, Walter, grieves in the background, July, 2008. Photo by Michael DeMocker/The Times-Picayune.

While reassuring for Marquisha, bullets were known to pass with ease through the plywood walls of FEMA trailers. For example, at 4:22am on a July morning in 2008, 28 bullets were fired from an AK-47 in the generally sleepy lakeside neighborhood of Gentilly. The bullets passed through the aluminum siding and plywood wall of a sheet rock contractor's FEMA trailer before striking his sleeping body. While most drive-by shooting occur in public or at least at a window, the assailants in this instance utilized the well known architecture of FEMA trailer master bedroom placement and bed height to shoot and kill Terrence Vine while he slept (Vargas 2008). The thinness of walls and the predictability of mass produced FEMA trailer architecture facilitated his murder.

An aura of horror lingered in the city amongst flotsam and vacant houses. Most were able to, at least partially, buck the psychic pull of sorrow, despair, and depression as time moved on and communities reemerged. The region rebuilt, slowly, and by July 2007 the

majority of trailer residents had moved into permanent housing. Remaining trailers progressively became indicators of those who could not get back on track, largely the elderly, poor, or disabled. Miranda, a resident of the Holy Cross Neighborhood of the Lower Ninth Ward described the unraveling of her neighbor Theresa:

She definitely had a hard enough time managing her life before Katrina but then after Katrina it was that much harder for her to manage her life. The first time I got her into her trailer, it was like a **blast** of formaldehyde in the face. I mean you would walk in there and it would be really thick. She was really freaked out by the trailer. She wouldn't cook in it and she was afraid to use the heat in it. Ya know she wasn't eating properly. [...] She had become very gaunt. She had started doing this thing where she was running with her dogs in a very frantic manner. She used to just walk her dogs, but she may have developed some kind of disorder...

In 2008, Theresa was still living in her trailer when she was found dead in the bathroom of her blighted home, adjacent to her trailer. Neighbors were unsure whether to suspect foul play—as she was increasingly rubbing people the wrong way—or if death was the natural conclusion to her deterioration. The coroner labeled it an “unclassified death.” The amenities of the trailer, such as a propane stove and heater, were materially present, but risk and fear prohibited Theresa from making use of them. While sheltering her from the elements the trailer also exposed her to a bevy of unnerving contingencies.

Theresa did indeed have some reason to fret. By the end of 2007 FEMA had documented 86 emergency housing unit fires in Louisiana alone (Robinson 2007). The only attempt to tally the number of FEMA trailer fire deaths yielded a figure upwards of two-dozen fatalities (Robinson 2008). Most deaths were due to smoke-inhalation, when non-functional smoke alarms failed to wake slumbering residents. Other trailers simply exploded, leaving behind few clues for fire investigators. Some fires were attributed to risky behaviors like smoking in bed, some stemmed from inhabitants not being familiar with the operation of

liquid petroleum gas stoves, some from faulty installation or maintenance (the three major FEMA trailer installation and maintenance contractors were found to be in violation of Louisiana liquid petroleum gas installation law), some were due to design issues,<sup>23</sup> and some from electrical short-circuiting.<sup>24</sup>

The possibility of dramatic fiery ends haunted many trailer inhabitants but the more commonplace and more uneventful hazards were slow chemical exposures and the general draining of life for FEMA trailer residents—especially for those that remained in them for more than two years. The desperation was most acute in remote, and often drug-addled, FEMA trailer parks. 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 suicidal ideation would appear the most discernable community pastime (Spiegel 2007; Larrance et al. 2007). Located 30 minutes from the nearest town, inhabitants could be seen walking along the highway to work. Some found unemployment to be more financially advantageous than paying for travel costs and babysitting. Any of the fleeting connectivity of FEMA trailer inhabitants that will be elaborated in the following sections had long since expired in such extreme and isolated sites.

The following sections focus on the more common experiences of illness and architecture induced connectivity rather than the extreme and spectacular manifestations of

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<sup>23</sup> In most units burner and ignition knobs on the stove appeared identical. If propane was smelled in the trailer and the inhabitant rushed to turn off a burner, the ignition knob could be mistakenly turned and send the unit into flames. FEMA did react with haste to this particular facet of the issue and hired contractors to paint the ignition knobs red.

<sup>24</sup> An RV replacement part salesman in Mississippi, with whom I regularly speak, recounted the following interaction with a federally contracted FEMA trailer maintenance electrician to summarize what he referred to as “the mentality of FEMA contractors.” In 2006, the part salesman overheard two maintenance contractors in his shop scoffing at the price of the appropriate replacement light switch for a FEMA unit. They were headed out the door to buy a cheaper light switch that was not specified to work with the 12-volt system of the trailer but rather a 110-volt system of a conventional home. The salesman called out, “Sir, do you realize the trailers are 12-volt, *these*,” he said pointing to the light switch on the wall of his shop, “are 110-volt?” Stone-faced, one replied, “Yeah, I’m a certified electrician I can make it work.” The part salesman follows up, “sir, do you realize it could catch fire?” The contractor agrees, “Yeah, but these are FEMA trailers, these people won’t be in them for long,” and walked out the door.

isolation, detailed above. I mention Scenic Trails to underline that shared infrastructure and illness did not always and everywhere reorient inhabitants towards collectivity. I don't want to fetishize connectivity, for becoming solitary is also a noteworthy social pattern. And indeed, the residents of Scenic Park became agitated, depressed, and self-isolating in unison.

Displaced life in FEMA trailers was not purely disheartening and leaning toward death. For property owners, the FEMA trailers reduced the distance of displacement from dozens of miles to the few yards between the emergency housing unit and what was left of their house. 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 woman who placed her trailer on her mother's property on the West Bank after her Uptown apartment was rendered uninhabitable. Another reveled in the trailer's efficient use of space, “It was like living in a Swiss Army knife! Everything was always within reach.” This man experienced no air quality issues and wished to buy a resold FEMA trailer to use in-between his oilrig shift work. Almost everybody boasted of their ability to throw parties in their trailer, even if they ended up outside the trailer and were “something of a headache.” A friend went to a punk show in one trailer. An informant conceived her son in another. Life in its full dynamism went on in the trailers, even if it was predominated by dark notes for many.



**Figure 1.4** 76 year-old FEMA mobile home inhabitant in St Bernard Parish—just East of New Orleans—January 2012. Photo by Akasha Rabut.

## **Faubourg FEMA**

I use the term “Faubourg FEMA” to refer to the FEMA trailers in aggregate, as these trailers amount to a temporary and scattered subdivision-of-sorts. My use of Faubourg, the antiquated French term used in New Orleans to designate residential neighborhoods that were built as extensions to the original City Plan, references both the trailer suburb as an unplanned addition to the city and its unorthodox claims on cohesion (faux-bourg or ‘false

borough').<sup>25</sup> It represents an internal displacement that spans both FEMA trailer parks and trailers installed on the lawns and driveways of homes-in-ruin.

While there is variation in the intensity and duration of Faubourg FEMA connectivity, a constant was the chintzy walls of the trailer that served as the only thing that held the unhinging destruction of the Gulf Coast at bay: 1/8 inch plywood walls, hollow core 1/8 inch high density fiberboard with cardboard fill door, and 5/8 inch particle board subfloor. The chemical composition of these engineered wood walls would soon become the subject of international news, launch sprawling lawsuits, convene a congressional investigation, and spur a multi-million dollar epidemiological investigation. Chapter 2 will discuss the epistemological practices of both citizen and governmental formaldehyde assessments. Chapter 3 will address the FEMA trailer formaldehyde litigation. But at present I want to discuss the “de facto connectedness” (Ferguson 2012: 256) generated by the mass distribution of trailers across the Gulf South.

Regardless of the minor design differences and diverse locales of the FEMA trailers, never before in U.S. history had so many people been thrust so abruptly into nearly identical living conditions.<sup>26</sup> The FEMA trailers can be viewed as a neighborhood or city of their own—one that was distributed across the Gulf Coast and pivoting around New Orleans. An auxiliary city of homogenous architecture and over 300,000 residents grafted atop a ravaged coastline. A scattered city made in the hopes that it would be quickly disassembled. This infrastructural archipelago is perhaps best described as livable scaffolding, designed to assist the Gulf Coast in re-articulating discrete senses of place and community that were shaken apart in disaster.

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<sup>25</sup> Faubourg is the official title for many of the now essential neighborhoods of New Orleans: viz. Faubourg Tremé or Faubourg Marigny.

<sup>26</sup> Japanese-American internment during WWII is second (approx. 190,000 fewer inhabitants).

Sense of place is usually linked to distinct geographic space (Chamlee-Wright & Storr 2009), but the jarring reshuffling of the Gulf Coast, and particularly for those locales hit hardest, in late 2005 allowed for a unity without proximity. This perceived togetherness is not just based upon the trailers' synchronous arrival and similar architecture, but rather one that emerges out of the social practices embedded in their inhabitation.<sup>27</sup> I argue against Bachelard's idealized assertion that "the house thrusts aside contingencies, its councils of continuity are unceasing. Without it, man would be a dispersed being" (Bachelard 1994 [1958]: 7). In the case at hand, the home was a source of contingencies and *through* these homes Gulf Coast residents ephemerally became dispersed beings, but dispersed together. It was both through the awkwardness of similar mass-produced space and the pain of similar somatic harm that evoked a fleeting sociality.

This diminutive way of being in common was easily missed among the multiple struggles of rebuilding (*cf* Adams 2013) and the big rhetoric of post-disaster community resilience (*cf* Flaherty 2010; Solnit 2009: Chapter 5) but undergirded the everyday lives of some three hundred thousand Gulf Coast residents. The form of this discontinuous, albeit vital, mode of relating is similar in form to that identified by Zoë Wool in an American veteran's 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" (Wool 2011: 3). A transitory alignment of domestic architecture and bodily dysfunction pushed spatial frustrations and illnesses past individuating disruption (Becker 1997) into a social dynamic. The trailers furnished a social force that illustrates how collective experiences of suffering not only "reshape interpersonal responses to catastrophe and terror" (Das & Kleinman 2000:

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<sup>27</sup> The community was not imagined (Anderson 1991 [1983]) but rather enacted in piecemeal form.

2; see also Hinton & O'Neill 2009; Kleinman, Das, & Lock 1997) but also do so during less-than-catastrophic episodes and invisible instances of distributed harm that occur in the shadow of spectacular calamity (Povinelli 2011).

Although New Orleans is central, both geographically and etymologically, to Faubourg FEMA, it and its affects extended well beyond the borders of Orleans Parish and the state of Louisiana. Faubourg FEMA is a suburb of the central Gulf Coast. Of course life in the FEMA trailers was not simply about forging new and often fleeting communities. It was a regional collectivity that shares both the variant horrors of life dislodged and the uniform architecture of the FEMA trailer that served as the substrate of recovery. The white aluminum siding and gaunt interior of the trailers functioned as the common foundation upon which the Gulf rebuilt.

### **The Parameters of Faubourg FEMA**

Out in the farthest corner of New Orleans East—a large suburban section of the city—is a neighborhood called Versailles. Versailles claims to be the home of the most concentrated Vietnamese population outside of Vietnam, a bastion for Vietnamese Catholics fleeing the war in the 1970s (Chiang 2010). It was late summer 2010 and fisherfolk, unemployed by the BP oil drilling disaster, milled about outside the bustling community development office where I was meeting my interlocutor, Ray. In a back corner office he began to tell me about life in his FEMA trailer. FEMA stationed some 200 trailers in a vacant lot by the Mary Queen of Vietnam church, 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' pre-storm residence. Sipping from his fluorescent red slushy between sentences, Ray nonchalantly described the patterns of inhabitation:

I was the fourth person actually to live in the trailer park. Slowly...people started coming in, different diversity of races: Black, little white people, and Vietnamese. Basically it was kinda like a stereotype thing, the one hundred trailers on the left side is Vietnamese and the one hundred trailers on the right side is, like, black, white—and a little bit Vietnamese. [...] It just happened that way, or maybe they did it intentionally...

Versailles, racial demarcations and all, was reproduced in the miniature scale of the trailer park, or as Ray succinctly put it, “it was like the neighborhood just got smaller.” The elaborate community and personal gardens of several Vietnamese-American residents were destroyed along with their homes. In the park, they quickly began cultivating their allotted driveways beside their trailer to grow Vietnamese vegetables and herbs that could not be found in local stores. It is not only the case that the flooding of the city tended to “magnify the social situations that existed before” (Miller & Rivera 2010: 180) but the spatial shakeup of disaster also magnified the physical situations that existed before the storm and both dimensions of landscape were mutually informing.

As large-scale geographies were diminutively replicated in FEMA trailer parks, social networks were reforged for those that lived in trailers placed on private property. Betty was dressed to the T when I came by to take her to lunch. Her dark green pants and blazer matched her green plaid baseball cap. She wasn't getting out much these days and wanted to make it count. After she was flooded out of her Upper Ninth Ward home, she spent a couple months bouncing between the homes of family in Lake Charles and Baton Rouge. Her house had no front yard, side yard or accessible backyard on which to plant a trailer—a common issue across hard-hit working class neighborhoods. Like many 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 a spare property in Boutte, Louisiana. That arrangement knocked 50 minutes off her commute. She leapt at the chance. Boutte was still a

half an hour away from family, friends, and old neighbors, yet Betty was remained in near constant touch with other FEMA trailer residents:

There were a lota people scattered all over the place in FEMA trailers. We would exchange thoughts, sit down and laugh, sit down and cry mmmmmhmm. [...] Some weren't good friends but people that we knew from around [and were now in trailers] that became better friends.

Disparate acquaintances became closer friends by the restructuring of social networks that followed in the wake of mass displacement. The homogeneous and cramped architecture of the trailers created shared banalities and spatial frustrations that brought inhabitants closer together, even if they were geographically distant. People, whose former lives were unlike, connected over the navigation of the common space of the FEMA trailer.

Miranda, introduced in an earlier section, also spoke to the way that the trailers became a focal point, “we were all fascinated with each other’s trailer experiences. It was a big topic of conversation.” Toxicity was not the exclusive generator of trailer talk. The mundane reality of their domestic space fueled much of their discussion, Miranda noted, “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<sup>28</sup> with extra room. And then definitely ones that would be more toxic, we would comment on them.”

One afternoon in August of 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 was happy to “let her do her thing.” Weeks later he was told that he had the highest formaldehyde level in the park, a reading of 0.323 parts per million (ppm). The U.S. EPA, amongst others, recommends a maximum formaldehyde indoor air level of 0.1 ppm. The Agency for Toxic Substances and Disease Registry warns

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<sup>28</sup> “Bump out” or “slide out” units were those that could expand their interior space by extending outwards a portion of the living room.

that health issues may arise during chronic exposure (> a year) at levels of greater than 0.008 ppm.<sup>29</sup> “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. Largely because he didn’t display any symptoms of illness, Ray never sought out more than a cursory engagement with other FEMA trailer residents. The parameters of this FEMA trailer-based associational group are not only informed by personal proclivities of sociability and curiosity but also one’s biological tolerance, sensitivity, or the search for the etiology of mysterious illnesses.

For many other FEMA trailer residents, the so-called ‘nuisance’ effects of formaldehyde in the trailers, over time, gave way to more serious health issues. Like the man at the beginning of this chapter, many inhabitants noticed increases in maladies such as chronic pneumonia, asthma, skin allergies and, in the case of Betty, cancer. Within a few months of moving in Betty came down with pneumonia for the first time in her fifty year long life. She remembers her physical descent, closing her eyes and putting a forkful of food back on her plate, “I was feeling bad, feeling worse and worse. I was unable to talk for any length of time without getting short of breath.” Eight months after moving in, Betty found ballooning lumps under her breast. Since then she has been enduring the constant hurdles of surgeries and chemo regimens in the battle against persistent breast cancer. Her sickness, which she attributes to the trailer, accelerated her desire to seek out and connect with other trailer inhabitants. Both in the search for a cause and in the search for comfort as a result of her painful therapy, Betty reached out to other trailer inhabitants.

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<sup>29</sup> The threshold for possible negative health consequences is over 12 times lower than the maximum recommended exposure limit. The large difference between these numbers is revelatory of the contested terrain of low-level exposure to be discussed in detail in the following chapter.

## Illocality

A nearness to Tremendousness—  
 An Agony procures—  
 Affliction ranges Boundlessness—  
 Vicinity to Laws  
 Contentment's quiet Suburb—  
 Affliction cannot stay  
 In Acres—Its Location  
 Is Illocality—  
*-Emily Dickinson*

What I refer to as the 'illocality' of Faubourg FEMA is not simply that of a sense of place without a unified location, stemming from the deployment of trailers across four hundred miles of the Gulf Coast. The term also takes into account the trailers as a site of sickness. The shared illnesses of exposure, the shared space of mass-produced trailers, and the shared foundation of displacement were mutually supportive of the transitory post-Katrina collective order I refer to as an illocality. If Faubourg FEMA is the infrastructural and affective starting point, the illocality is the experiential destination and a mainstay of its social connectivity.

Illocality is a pun originally made by the American poet Emily Dickinson to describe her own ambiguous domestic suffering, of which her poems serve as auto-ethnographic accounts. In the poem above, Dickinson situates “Affliction” not merely as a “Suburb” lying just outside of the parameters of normalcy but as a place that lies beyond the possibility of “Location” and the quantifying and containing of land in “Acres.” Her suffering defies zoning and vicinity, and its space-defying qualities are coupled with illness. Place itself becomes engorged with a sense of sickness, an ill-locality. The notion of illocality discussed in this section provides the theoretical underpinnings for this chapter’s ethnography. The experience of life in the FEMA trailers overflows the realm of pure affect, but also falls short of a discernable sensibility, and the conventional remit of phenomenology. This section

begins to theorize the grey area between the fleeting distress and habituated suffering.

As applied and expanded here, the concept of illocality draws upon studies in the experience of pain and trauma that demonstrate pain's ability to "unmoor" a sufferer from "common, immediate lived experience," a domain phenomenologists refer to as the *Lebenswelt* or the lifeworld (Good 1991: 122). Access to the lifeworld is dependent upon a certain degree of comfort, so that the body's perceptual radar can be focused outward and not caught up in comprehending internal dysfunctions or consciously regulating bodily processes (Leder 1990). As Elaine Scarry explains, "It is only when the body is comfortable, when it has ceased to be an obsessive object of perception and concern, that consciousness develops other objects" (Scarry 1985: 39). When afflicted, the body lessens its attention and engagement with the world beyond itself. Walls, Scarry notes, take on some of the protective functions of the self—temperature regulation, reducing contact with the world—as an "enlargement of the body." This allows the body to, in turn, "act less like a wall" (*ibid*). But what happens when walls act less like a wall? When they expose instead of protect? The case of the FEMA trailers, read with insights from Dickinson's poetry, can shed light on multiple other existential nuances beyond the simple individualizing quality of pain.

Pain and space are caught up in each other in Dickinson's work. In line with Good's nautical metaphor of suffering's "unmooring," Dickinson asserts in another poem that pain has a transportive quality, one that leaves her feeling like "Some Sailor, skirting foreign shores."<sup>30</sup> Experiences of pain can make the sufferer feel alone and adrift on affliction's ocean, making the lifeworld—represented in the poem by dry land—feel distant and alien. Similarly, Rob Nixon has pointed out that changing geographic location is not necessary for displacement. The chemically infused experience "displacement without moving" when the

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<sup>30</sup> The simplest convention in naming and citing Dickinson's poetry is to note the first line as the title. This excerpt is from "Just lost, when I was saved!"

inhabitability of their bodies or communities is toxically threatened (Nixon 2011: 19). For FEMA trailer residents the displacement is double. It takes place both in the geographic space of being forced from one's home and in the internal "corporeal space" (Moss & Dyck 2000) of chemical dysfunction and displacement.

In contrast to Scarry's individualizing notion of bodily discomfort, the internal disorientation of affliction drives Dickinson to give pain relational meaning. She is inclined to not only chart her own strife but to also "measure every Grief" that she encounters, "still fascinated to presume/ That Some—are like My Own."<sup>31</sup> As she searches for an understanding of her own pain in the suffering of those she meets, suffering both re-configures space and brings the sufferer into new relations with afflicted others. The shared housing infrastructure of FEMA trailer inhabitants created baseline grounds of comparison. On top of this foundation, residents commiserated over the spatial and material shortcomings of their temporary homes that gave them daily grief, and peered more deeply into each other's emergent somatic dysfunctions.

Chronic suffering is not only individualizing as the phenomenological literature suggests (Good 1994, Jackson 2005), but is also generative of new lines of relationality—a search for understanding beyond one's own body. This is the case for both Dickinson's chronic woe and FEMA trailer residents' chronic environmental health issues. Anthropologists have asserted that an acute instance of grief "mobilizes trans-individual systems of communication, meaning, and value" (Seremetakis 1998: 151) and that individually felt acute pain during acupuncture generates synchronicity, "breaks down habitual boundaries, carries individuals away from their habitual focus on themselves, and makes possible the experience of an intense feeling of commonality" (Hsu 2005: 88). While

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<sup>31</sup> From the poem, "I measure every Grief I meet."

piecemeal, partial, and less immediate than the collectivizing potential of acute pain, the stories collected in this thesis suggest chronic distress too poses the possibility of generating practices and spaces of trans-individual connectivity (also *cf* Alaimo 2010).

FEMA trailer residents enacted an illocality structured by the qualities and impulses of affliction. Trailer occupants with an array of strange symptoms sought out sometimes-distant trailer residents to swap stories and collectively accumulate understandings of the bodily effects of trailer life. Anthropologists are wont to scale-up mass sensory phenomena into discernable “sensibilities” (Classen 1993, Geurts 2002, Throop 2008) which Kathryn Geurts defines as “a field where habituated bodily sensations link to individual feelings, attitudes, orientations, and perceptions and finally to cultural themes, motifs, and ethos” (2002:17). Yet, life in the FEMA trailers was hardly habituated. Indeed, residents were actively resistant to becoming inured to their temporary emergency housing, and virtually all attested that it “never felt like home.”<sup>32</sup>

The post-disaster landscape and the domestic space of the FEMA trailers were dizzying, disorienting, and inflected the ordinary with otherness. The dysphoric affects of displacement and chemical exposure that left inhabitants groping for meaning can hardly be assembled into a discernable (and now bygone) sensibility that united the predilections of self and society in a semiotic field. We also cannot exclude the affective agency of the built environment—in the form of the FEMA trailers—or the destruction of the built environment—the ruins of the Gulf Coast. We can however bring affects into the fold of medical phenomenology, to better understand how the visceral apprehension of the unusual

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<sup>32</sup> The discord of everyday life in the FEMA trailers will be explicated in detail in Chapter 4. As mentioned in the introduction, a close reading of ordinary life in the FEMA trailers was more readily achievable amongst those currently residing in resold FEMA trailers as opposed to the largely retrospective accounts of Gulf Coast residents who had, more often than not, moved from their trailer.

or the unnerving colors experience, suffering, and sociality that fall short of crystallizing into a sensibility.

The social connectivity of the illocality is but a subset of Faubourg FEMA, as many showed no signs of illness or were too preoccupied with other aspects of post-Katrina life to pay attention to sicknesses. It is easy to imagine the diversity of situations in which FEMA trailer residents found themselves, and the ways in which various factors would thwart or accentuate one's interest in their and others' trailers or health. Some became too sick to think about anyone but himself or herself. Some preferred to keep to themselves. But looking at the individual misses the form of the collectivity itself, which, as will be demonstrated by the maps in the following section, is regionally dispersed, variously concentrated, and only partially articulated.

## **Geographies of Affect, Geographies of Infrastructure**

How, this chapter asks, do people relate by way of (defective) emergency infrastructure? What are the filaments of relationality that emerge in the wake of mass displacement, the regional inhabitation of mass produced homes, and mass exposure to formaldehyde? How can an analysis of the FEMA trailers respond to calls (Walker 2010: 24) for more nuanced forms of chemical exposure spatiality?

Addressing these questions requires pushing medical anthropology's longstanding engagement with phenomenology towards more recent attempts to formulate an anthropological version of affect theory. Affect can help us to make sense of social phenomena and sensations that exceed the horizon of habituated experience and the discrete avenues of the senses. Affect, as I will show in this thesis, can attend to modes of perception that take place in situations where the social and material norms have been upended and

semiotic rubrics of interpretation loose their grip. Affect can augment phenomenology's focus on accustomed patterns of perception and cognition by attuning to the fleeting and diffuse sensations that linger among circumstances of anomie and large-scale change.

For the last decade affect theory has been percolating through queer theory (Sedgwick 2003, Berlant 2008, Berlant 2011), media theory (Massumi 2002, Blackman 2012), geography (Thrift 2007), and sociology circles (Clough & Halley 2007). Anthropologists have only recently taken up the concept, which has been heavily theorized yet only lightly documented empirically.

Affects are not equivalent to emotions as they are “not always already semiotically mediated” (Mazzarella 2009: 292). Affects are said to be tempered by intersubjective patterns and forces beyond the individual, and thus beyond the remit of pure psychology. They are catalyzed by sensuous stimuli that do not fit neatly within the remit of sensory anthropology. These ‘impersonal’ feelings are somatically experienced. They manifest somewhere between the body and the mind, sidestepping a direct encounter with Cartesian dualism and ensuing debates. Affect manifests not as practice, like the tacit knowledge of Bourdieu's habitus (1987), but as a semiconscious awareness or attunement that “primes us for action” (Thrift 2007: 221) or inaction as, the case may be, in the depressive space of some FEMA trailers. Affect theory itself is populated by a resolutely ambiguous and evocative vocabulary, largely terms for increasing and decreasing energy or strengthening and impeding the power of bodies: viz. ‘amplification,’ ‘dampening,’ ‘irruption,’ ‘intensification,’ or ‘surge.’<sup>33</sup>

On of the most cohesive lines of anthropological research into affect emerges, like

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<sup>33</sup> The indistinctness of descriptive language and slipperiness of social phenomena is reminiscent of the 1990's and early 2000's anthropological focus on ‘cultural poetics’ (Clifford & Marcus 1986, Stewart 1996, Herzfeld 2004). As indicated by Kathleen Stewart's transition from cultural poetics to affect (Stewart 2007) and the current absence of cultural poetics' invocation, cultural poetics' awareness of social phenomena seated in pre-personal feelings may have come to roost in the analytics of affect theory.

this chapter, out of urban ruination. Vincanne Adams, following Muehlebach's (2011) study of affect and labor in Italy, documents how faith-based volunteerism was conjured to rebuild post-Katrina New Orleans as state welfare systems receded, a process that was an instrument of profit for disaster capitalists (Adams 2012: 210). Christina Schwenkel avers that enthusiasm and utopianism in post-war Vietnam emerged out of the mundane figure of the brick, which signified both the past capitalist assaults in the form of ruins and the future potential of socialist rebuilding (Schwenkel 2013). Joseph Masco (2008) argues that much of the contemporary US "war on terror" is sustained by a popular reverence for mass destruction. This sensibility, which became something of a civic duty in the mid-twentieth century, was cultivated by the state during the Cold War not through actual ruins but by imagining, planning for, and enacting in simulations the atomic destruction of American cities. Such an affective conditioning, Masco posits, extends also to the post-Katrina landscape in which both President George W. Bush and Mississippi Governor Haley Barbour turned to nuclear bomb imagery to describe the hurricane's destruction (Masco 2010a). In sum, these studies focus on the "engineering of affect" (Thrift 2007: Chapter 8) to the instrumental ends of the state and market.

Although the body is the supposed seat of affective perception, these studies almost entirely avoid ethnographically detailing embodied sensation. They focus on how visceral feelings stir people to action, but without documenting the visceral feelings themselves. By black-boxing sensation they run the risk of aligning, with the psychological school of affect theory that relies on debatable or overturned findings in experimental psychology.<sup>34</sup> Such conceptions bear essentialist undertones as these theorists impute that affects tap into 'hardwired' reactions and can manipulate 'autonomic' behavior. Phenomenology need not be

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<sup>34</sup> For critiques of the experimental psychology wing of affect theory see: Leys 2010, Martin 2013.

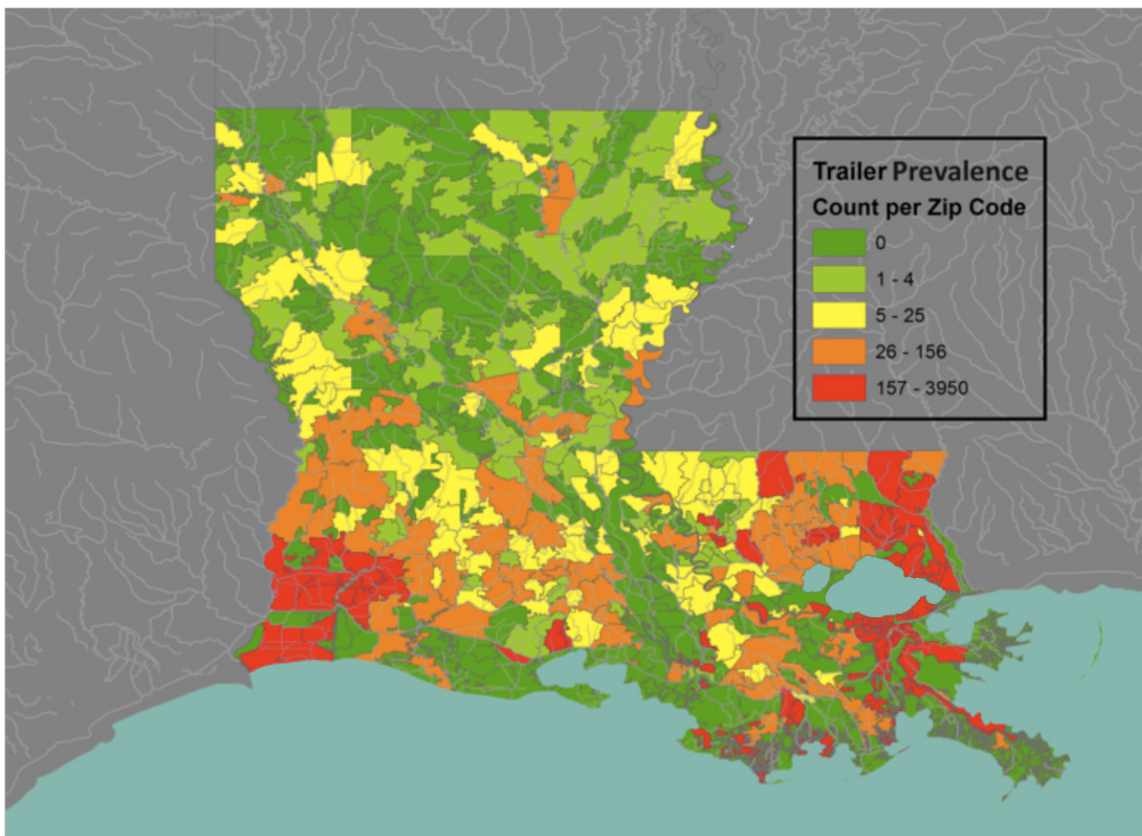
jettisoned in order to pursue affect. The two key exceptions to this trend are Kathleen Stewart's (2007) work on the affective patterning of an America located ambiguously between the middle class and beyond the pale West Virginia, which will be discussed at length later in the thesis, and Yael Navaro-Yashin's work on post-war Cyprus (2012), which most closely relates to the contents of this chapter.

In *The Make-Believe Space* Navaro-Yashin contends that “the environment exerts a force on human being in its own right, or that there is something in space, in material objects, or in the environment that exceeds, or goes further and beyond the human imagination, but that produces an affect that may be experienced by human beings all the same” (2012: 18). She argues that affects are a necessary analytic because the forces at play in her fieldsite were not of solely human origin and therefore exceed longstanding categories of social analysis. The anthropology of emotions falls short because it posits manmade ‘culture’ to be the mediator of human feelings and affords little room for other mediators.<sup>35</sup> Likewise, a focus on subjectivities or social suffering would rely too heavily on notions of human interiority and human agency (ibid: 25-27). In Navaro-Yashin's view human agency is not swapped out for object agency, but rather her de-centered approach follows both avenues simultaneously. Things secrete affects and people project affects upon things (ibid: 171). In this vein, I began the chapter by unpacking the spatiality of citizenship and how rubrics of national belonging are grounded in the space of the home and registered affectively. In other words, while the environment does influence people in a way “is beyond human imagination,” such impulses are modulated or catalyzed by social patterns and imaginings.

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<sup>35</sup> Additionally, affects sideline notions of the self that form a circuit with “culture” in the anthropology of emotions. Affects are theorized as prepersonal or presubjective. Such a conception does not fit into the self-culture system of the anthropology of emotions.

In analyzing how space, matter, and human imaginaries co-constitute the blasted landscape of the Gulf Coast I too observed “the eeriness discharged by a territorial space and material objects left behind by a displaced community” (ibid: 20), not in the aftermath of war but in the aftermath of disaster. Although Navaro-Yashin outlines, in the course of her work, a rubric for “affective geography” in “make-believe space,” she leaves further room to spatialize felt intensities across territories of study. If we are to take the reciprocal engagements of human bodies and the material world seriously we need both an affective geography and a geography of affect. In other words, what would it look like to envision the disaster *through* the distribution of emergency infrastructure, rather than the phantasmic space between government propaganda and the walls of the home? To begin this process of emplacing affects into both geographic space and the arrangements of the built environment, a process of envisioning Faubourg FEMA and its illocality, I have fashioned a two maps: Figures 1.5 and 1.6.



**Figure 1.5** Map of the concentration of FEMA trailers in Louisiana per Zip code. The colored intervals represent the quintiles of distribution.

Both maps are visualizations of the same data, which I received in response to one of many Freedom of Information Act requests. Both I visualized with the same software.<sup>36</sup> Both are maps of Louisiana. The first, Figure 1.5, is straightforward. Geological features—the squirming lines of rivers and bayou coastlines—and the contours of some fifteen hundred zip codes demarcate the terrain. The colors indicate the scale, across five intervals, of FEMA trailer deployment in each Louisiana zip code. The surfeit of red and orange in the southeastern corner of the state can be read as a proxy for Hurricane Katrina’s impact; in the southwestern corner, that of Hurricane Rita. The cluster of small zip codes fanning out, below the lake, Lake Pontchartrain, is New Orleans. High concentrations of destruction extend down into Plaquemines parish, the southernmost appendage of Louisiana, and up the lake’s

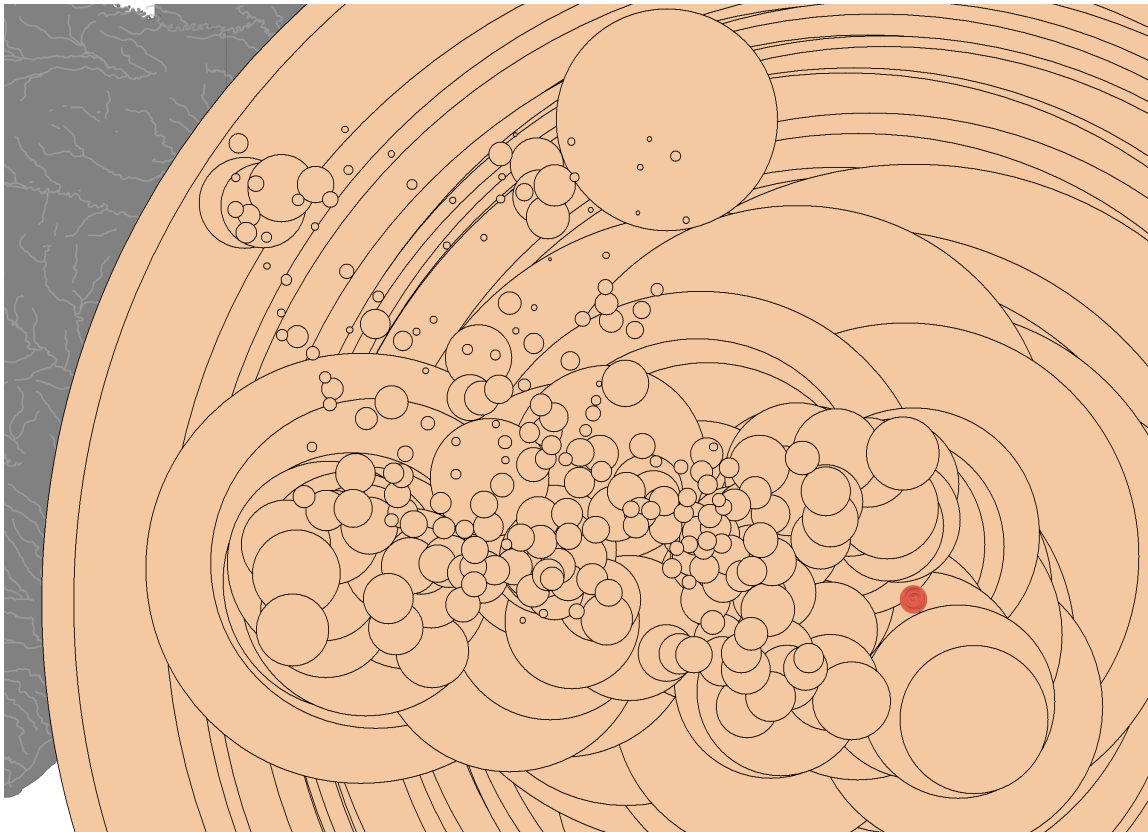
<sup>36</sup> ArcGIS 10.

north shore. Zip code size is generally inverse to population density—the more concentrated the population the smaller the zip code—but this relationship is not precise. As a result, the shading of some smaller rural zip codes exaggerates the concentration of FEMA trailer deployment and destruction. But in general, zip codes are suitable unit for assessing the density of displacement and offer more precision than parish level projections.

Some insights about the regional experiences of post-disaster life can be gleaned from this first image. Areas depicted in light green and yellow—those on the fringe of destruction or in the rural interior of the state—rebuilt in relative isolation. The two southern corners of the state throbbed with housing need and FEMA trailers were a nearly ubiquitous feature of the landscape. Beyond such observations the first map is hardly emotive. The form of presentation does not cater to the meaning of the data. The map is undemanding and depicts space in a way that is familiar and very much at odds with the ravaged world it depicts. The map conveys the numerical information in a tidy and predictable way at the expense of the affective underpinnings of post-disaster life that filled the region and fill this chapter.

In the aftermath of the storms, the landscapes of the Gulf Coast radiated, as James Clifford has recognized in reference to more general feelings of displacement, a "visceral awareness of a 'given' world suddenly gone" (Clifford 2012: 425). The airs of otherness exuded by the post-disaster landscape and the FEMA trailers were only furthered by what some referred to as the 'formaldehyde fog' that hung in the indoor air of these emergency housing units. Any map of FEMA trailer distribution is not just a map of displacement but also of ongoing exposures to formaldehyde, as the chemical slowly leached into the air of these units from almost every interior surface (Maddalena et al. 2009, Murphy et al. 2013). The following map attempts to scale up the affects that manifest 'in the gut,' at the cross roads of sensory perception and somatically registering changes to one's environment. The

following map attempts to zoom out from the individual experiences documented throughout this chapter, to let the atmospheres of both displacement and chemical exposure emerge at a level of accumulated abstraction.



**Figure 1.6 Magnitude of FEMA Trailer Proximity. The red dot represents New Orleans. The 19 largest circles correspond to New Orleans zip codes.**

To this end, Figure 1.6 employs a simple equation to dilate the affective resonance of the data, eclipsing precise geography in the process. The map plots the concentrations of FEMA trailers deployed to each Louisiana zip code. The number of trailers per zip code is divided by the zip code's area, and the output of this formula determines the size of the circle representing each area code. The larger the circle, the more FEMA trailers were in close proximity. The map highlights the collectivity of suffering across the state while also noting variations in the density of suffering. The map is conventionally incomprehensible, as trailer

data obscures the geography of the entire state. However, the aim is not to merely represent the discrete number of emergency housing units per unit of space but rather to begin to hazard a geography of affect.

The largest of these circles that depict FEMA trailer clustering are centered on the red dot that is the greater New Orleans area. The scale of distress there balloons out to set the backdrop of the entire region. In other words, the representation of woe stretches beyond its strict geography and beyond the frame of depiction. The suffering of displaced individuals living in relative isolation in less populated or less severely effected areas took place in a space of oversaturated affliction, a distressed region in which the tone was set by New Orleans. Indeed, the spatial overhaul wrought by the storms pulled longstanding patterns of space and place out of joint and made Faubourg FEMA possible. The map impresses a sense of this spatial bewilderment on the beholder.

Upon closer inspection the map is not devoid of traditional spatial information. The outline of Louisiana is well defined by a perimeter of smaller circles, which reveals the state borders, the statewide distribution of displacement, and contrasts in concentration across the state (compare with Figure 1.5). In the first map, the displacement resulting from Rita in southwestern Louisiana appears to be of almost identical severity to that of Katrina in the southeast—both southern corners of the state have a similar number of red and orange zip codes. In the second map, Rita's impacts are shown to be orders of magnitude smaller than those of Katrina.

This second map goes beyond solely representing spatial concentrations of FEMA trailers to begin to convey the affective intensities of post-disaster life that these emergency housing units both informed and harbored. Further, the map provides inroads to a discussion of how such distributed infrastructure and attendant visceral forces re-oriented the un-hinged

sociality of the Gulf Coast. The text of this chapter will in-fill these circles with the shared affects of post-disaster life that pivoted around the FEMA trailer: the reorganization of space and place, the departure from a relatively stable landscape of habitation, the hope of rebuilding, the appearance of illnesses and their due concern. The map illustrates some of the regional destruction but also justifies my focus on the FEMA trailer locus that is New Orleans. The map indicates the degree of dis-ordering and re-ordering that took place in New Orleans and thus the degree of spatial and affective unmooring that facilitates the social dynamics of this chapter.

I draw inspiration for this map from the situationists who, in the 1950s and 60s, denounced the affective absences of traditional mapping. This international group of self-proclaimed “social revolutionaries” sought to make alternative maps that were primarily concerned with, as landscape architect James Corner summarizes, “engaging life situations and social formations” rather than strict geography or demography (Corner 1999: 231). They designed “psycho-geographic” maps in an attempt to convey the “subjective street level-desires and perceptions” of individuals as they navigated the urban landscape (ibid). The map in Figure 1.6 is a hybrid form, one that bends the data of a conventional birds-eye-view map towards “street level” experience. It is not an individual’s experience of the city—for which such psycho-geographies are best known. Rather the map represents a dimension of post-disaster life that is “more than individual but less than societal” (Holbraad & Pedersen 2013: 9). Holbraad and Pedersen assert that this extra-individual register is the most productive unit of analysis for the anthropology of security (ibid). As the affects of FEMA trailer life emerge at the turbulent intersection of ostensible domestic security and situational and biological insecurity, affects and security are densely coupled in these emergency housing units.

The map is, of course, an overly cohesive heuristic as the immensity of social, environmental, material, and human damage wrought by the storms approaches the unknowable (Peck 2006: 692).<sup>37</sup> Despite patent limitations, the map does serve as a provocative visualization of a field of relationality that emerged among the rubble and emergency housing, one that eludes simple categorization as "community," "network," or "circuit." The circles themselves do not represent the content of post-Katrina affects, but rather the image as a whole affectively primes the beholder for imagining ways of living and feeling that overspill normative conceptions of place and are grounded in toxic temporary housing.

## **Conclusion**

The scale of emergency housing deployment after Katrina and Rita was unprecedented. This chapter delved into the role played by these bare-bones shelters: materially, socially, and experientially. At the heart of rationale of the FEMA trailers was their ostensible ability to shelter and protect. The functioning of their walls was assumed to be binary, merely sorting inside from out. As is the consensus of Western theorists who have contemplated the walls of the home, they are either intact and provide privacy and humanity or they are absent and residents are unrelentingly laid open to exposure and without material protection (Bachelard 1994 [1958]; Arendt 1998 [1958]; Scarry 1987; Brown 2010). Yet the very substance that gave solidity to the engineered wood structure of the trailer—the setting agent formaldehyde—also cultivated an exposure that undermined the protection afforded by

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<sup>37</sup> What these maps leave out is revealing. To investigate the racial disparities of post-Katrina rebuilding Thomas Craemer counted the number of trailers visible in areal photographs of disproportionately white and disproportionately black neighborhoods that sustained roughly the same amount of damage. He found that largely black neighborhoods had substantially fewer trailers than largely white neighborhoods of comparable economic standing (Craemer 2010: 373). In this way, the relative absence of trailers served as an indication of racialized asymmetries in rebuilding.

these homes.

This chapter documents the biosocial ramifications of post-disaster homes that fail to live up to their ideal of benign protection. The body is caught up in the walls of its shelter and dependent on them for the sensory freedom to engage with the lifeworld. The confluence of the identically replicated walls of the FEMA trailers, the unmooring trauma of displacement and illness thought to derive from the walls of their only structural comfort produced the distributed and sick space of Faubourg FEMA.



## CHAPTER 2

### Un-knowing Exposure

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There is not one but many silences, and they are an integral part of the strategies that underlie and permeate discourses.  
—Michel Foucault (1978: 27)

Within a fortnight of the inundation of New Orleans and the ravaging of the central Gulf Coast, a single manufacturer, Gulf Stream Inc., had secured over \$500 million in contracts to build temporary housing units. Of the over two and a half billion dollars in emergency housing contracts awarded by the federal government, Gulf Stream's was the largest. The company opened new plants to accommodate these rush orders. A Gulf Stream employee recounted the working conditions to the House Committee on Oversight and Government, "There would be supervisors and plant managers walking down the line with bullhorns screaming at us, 'go faster, you're not doing your job, you don't deserve your paycheck.'" Many laborers on the assembly floor experienced compromised health while working to meet these large expedited orders; symptoms ranged from constant sinus infections and shortness of breath to bloody eyes and noses. When employees complained of the stench and "stickiness" of the fiberboard and lauan paneling, they were met with little explanation or reaction from their supervisors other than noting that it came from a "new supplier" (Majority Staff Analysis 2008: 10-11).

As displaced Gulf Coast residents began to inhabit these emergency housing units and fall ill, complaints began to trickle back to FEMA and trailer manufactures. "There is an odor in my trailer that will not go away," read a message sent in March 2006 by an inhabitant of a Gulf Stream-made FEMA trailer to the company via a comment feature on their website. The

complaint continued, “It burns my eyes and I am getting headaches every day. PLEASE, PLEASE HELP ME!!”<sup>38</sup>

Concurrently, other trailer residents began to investigate the chemical constitution of their new homes after experiencing increased asthma attacks, bloody noses, insomnia, chronic fatigue, headaches, diarrhea, or dermatological irritation. On his first morning in his new FEMA trailer—installed in front of what little was left of his Mississippi home—Paul Stewart woke up to find his pet cockatiel inactive on the floor of his cage, his wife bleeding from her nose, and a burning sensation in his eyes, nose, and throat.<sup>39</sup> Paul, a veteran, businessman, and environmental activist, began researching inexpensive means of assessing the quality of the trailer’s indoor air. He found a \$39 mail-order formaldehyde test kit, which, when run in his home, yielded a reading of 0.22 parts per million (ppm), more than twice the 0.1ppm maximum indoor level recommended by the U.S. Environmental Protection Agency (EPA).<sup>40</sup> In collaboration with another local environmental activist, Becky Gillette, and equipped with funding from the Sierra Club (an American grassroots environmental organization), the two assessed the atmospheric formaldehyde content of 69 FEMA trailers in Mississippi. They found 61 units, or 88 percent, to contain indoor formaldehyde in concentrations higher than the EPA’s 0.1ppm threshold.<sup>41</sup>

This informal citizen science assessment drew international media attention and incited both a crisis in post-disaster governance and a multi-million dollar lawsuit. In this chapter I unpack the multiplicity of scientific processes that refute, dilute, and disqualify

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<sup>38</sup> This digital complaint was forwarded from Scott Pullin to Dan Shea, both employees of Gulf Stream Inc., on March 21, 2006. This and all further cited internal FEMA emails were disclosed during the discovery process of a congressional investigation into the mishandling of the FEMA trailer formaldehyde issue.

<sup>39</sup> The Stewarts had a friend air the trailer out for two weeks prior to their return to Mississippi. The cockatiel made a full recovery after being removed from the trailer.

<sup>40</sup> While this threshold is a useful, albeit conservative, yardstick for indicating the level at which potential negative health effects can ensue, it is not a regulatory benchmark, as domestic air quality is not regulated.

<sup>41</sup> These lay/activist tests were later largely corroborated, see Maddalena et al 2009.

claims of FEMA trailer-related formaldehyde exposure and ensuing negative health outcomes in both the immediate governmental response and later court proceedings. I document how multiple and divergent technical practices weave together into a larger regime of chemical exposure and ensuing illnesses obfuscation, what I later call “un-knowing.”<sup>42</sup> The methods of un-knowing analyzed herein span the realms of both federal controversy governance and the application of science in court. While the actors, instruments, and techniques of un-knowing shift between these domains, the outcomes remain the same. Such an analysis brings into relief the negative epistemological space that shapes the contours of both technoscientific and legal facts.

### **Techniques of Un-Knowing**

Historian of science Michelle Murphy observed a similar uniformity of toxic injury dismissal in her wide-ranging study on the chemical exposure complaints of female office workers beginning in the 1980s, a phenomenon that came to be referred to as “sick building syndrome” (Murphy 2006). Murphy contends that the refutation of toxic harm by the dominant means of scientific evaluation is structured by “regimes of imperceptibility.” Regimes of imperceptibility make sense of the patterned outcomes of scientific explanatory systems that time and time again found low-dose chemical exposures to be inconclusively toxic, undeserving of redress, and without an onus for remediation. Yet, attending to the existence of regimes of imperceptibility is not the same as explicating *how* such conclusions were reached. Just as we cannot fully understand scientific knowledge without also understanding processes of its formation (Latour 1987), we cannot understand scientific anti-

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<sup>42</sup> Nigel Thrift (1996: 97-120) details a “social unknowing” which divides unknowns into five groups. His usage aligns with the noun “unknowingness” as he is interested in states of unknowing and not my verbal and processual usage of un-knowing.

epistemology without detailed attention to its emergence. Phil Brown, a leading sociologist of environmental health, has long ago called for such an empirical investigation into the “*process* of scientific-knowledge making” in the context of toxic exposures (Brown 1992: 275, emphasis in original). This chapter thus responds to Brown’s call and elaborates Murphy’s analysis. The chapter further enumerates and theorizes the diverse means of unknowing by which regimes of imperceptibility are achieved. Some facets of toxic inconclusivity are the inevitable affordances of different scientific objects or exposure events, others are byproducts of shifting diagnostic criteria, while many more are tactically sculpted.

Scholarship on the latter category, the production of scientific indeterminacy, is rapidly developing within science and technology studies (STS) and affiliated disciplines. These studies largely document practices of inconvenient knowledge avoidance or contesting the causal relationship between products and adverse health outcomes in the pharmaceutical (Corrigan 2002, Avorn 2006, Abraham and Davis 2006) and tobacco (Proctor 2006, Michaels 2008) industries. Linsey McGoeey asserts that studies on the strategic deployment of ignorance are of increasing urgency in a democratizing and neoliberalizing world because such manipulations of the known are particularly well suited to contexts where public scrutiny threatens the viability of plain-old state and corporate secrecy (McGoeey 2007: 217, *cf* Galison 2004).

Anthropologists often pursue projects on navigating the expansive borderland between ignorance and knowledge, yet do so with a less concerted focus on the anti-epistemological practices of industries. Anthropological investigations that have traversed the domain of focus include work on public secrets (Taussig 1999, Masco 2010b), scientific ethics in the face of systematic ignorance (Rabinow 2004), the strategic blinds on governmental knowledge (Mathews 2005, 2008), plural forms of environmental health

evidence (Lora-Wainwright 2013b), and the health consequences of contemporary commodities (Singer & Baer 2009). Most applicably, Peter Benson and Stuart Kirsch (2010) have identified three key stages of corporate responses to claims of wrongdoing and the infliction of harm. These phases are: denial, acknowledgment and token accommodation, and strategic engagement.<sup>43</sup>

Benson and Kirsch's argument emerges out of case studies of tobacco and mining corporations, which represent two industries with perhaps the most unequivocal negative impacts on human and ecological health, respectively. The amount of scientific data, visual renderings (think black lungs and mountains turned into caverns), and cultural awareness supporting the injurious nature of the tobacco and mining industries are many orders of magnitude higher than that of domestic formaldehyde exposure. The less spectacular and less studied story of the FEMA trailers never pushed the federal government and trailer manufacturers past an initial phase of refutation.<sup>44</sup> This chapter demonstrates the host of practices packed into a protracted and largely successful process of denial, the process of making uneventful exposures even less demanding of redress. As will be demonstrated, some of the practices that fall under what Benson and Kirsch label as "denial" exceed human agency and are informed by larger discursive fields, pharmaceutical logics, or ethical limits.

The empirical contribution of this chapter to the literature on strategic unknowns and

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<sup>43</sup> These phases of response roughly correlate with what both activists and corporate defense attorneys alike commonly refer to as the four stages of the "dog bite defense." 1) My dog does not bite and even if it did it is not harmful 2) My dog does bite but it didn't bite you specifically 3) My dog does bite and it did bite you but your not hurt 4) My dog did bite and hurt you, but not too deeply (or, alternatively, that's not my dog!) (*cf* Sass & Rosenberg 2011).

<sup>44</sup> In addition to never achieving an admittance of harm or wrongdoing, a sentiment of the inevitability of federal and corporate impunity—what Benson and Kirsch refer to as the "politics of resignation"—was so resolute in the Gulf South that attempts at redress quickly became evacuated of all expectant feelings. While, Benson and Kirsch note that the second phase of crisis response is marked by corporations handing out "symbolic gestures of recompense" (2010: 465), the pursuit of recompense itself became a mere symbolic gesture for plaintiffs enrolled in the FEMA trailer formaldehyde litigation and drained of hope. This process will be detailed in the following chapter.

the convenience of inconclusivity is an apprehension of the multiple techniques of inducing ignorance surrounding a single issue. As my analysis moves through several scales, arenas of governance, and scientific practices it also became more and more apparent that, following de Certeau's distinction (2011: xix), the calculated *strategy* of strategic unknowns is more of a string of reactive *tactics* and opportunisms. This manifold and mercurial character of imperceptibility is indeed part of its strength, as failed mechanisms are easily contained and jettisoned and emergent resistances are shock-absorbed by rapidly erected lines of defense.

This unwieldy process could be theorized in aggregate as an "assemblage," to preserve the diversity of observed practices. Yet, as George Marcus and Erkan Saka note, the term loses its usefulness if thought of as "anything more than an illusion" (2006: 106). Indeed, the relationships between these procedures are minimal. Rather than focusing on pooling heterogeneous practices, I direct my attention towards the homogeneity of outcomes. The various modalities of scientific incomprehension, enumerated below, are part and parcel of the active and dynamic process of moving away from perception, admittance, or substantiation of mass chemical exposure, a discursive current I refer to collectively as "un-knowing." Un-knowing is not always and everywhere about the refutation and avoidance of knowledge but also involves the assembly of superseding knowledge claims that gain their force from the cultivation of authority rather than empiricism.

Un-knowing encapsulates the techniques by which ignorance is deployed, the privileges of secrecy are exercised, and the methods by which the facticity of exposure-related illnesses are called into question. Un-knowing includes both intentional tactical ignorance and unwitting discursive ignorance. As I shift my analytical gaze from harried federal denial of potential chemical health threats to the meticulously choreographed testimony of expert witnesses in the ensuing litigation, the filaments of un-knowing charted

in this chapter scale down from the brash and systematic exercise of governmental control to more sophisticated means of disavowing negative health outcomes.<sup>45</sup> What is at stake in these techniques of un-knowing is how we cohabit with low-dose toxicity, how we understand the human health effects of these exposures, and the allocation of responsibility for such impairments.

Apprehending the multiple and protean tactics that aggregate into un-knowing connections between chemical exposure and health effects demands a diversity of theoretical approaches. There is no one lens through which one can make sense of un-knowing. There is no master technique, no unifying logic. Approaching un-knowing from a single vantage, while perhaps more academically acceptable and digestible, fails to capture the murk of such practices. At the risk of appearing theoretically eclectic, I employ a triad of perspectives in the hopes of amassing a forensic toolbox for the scrutiny of un-knowing. I first make use of the STS focus on the avoidance of inconvenient knowledge, then utilize the Foucauldian analytics of the subjugation of knowledge (Foucault 2003) to understand the manipulation of toxicological thresholds in a federal assessment of chemical levels in the FEMA trailers. Transitioning into the courts, I track the ontological choreography (Cussins 1996) used by expert witnesses in the courtroom to evaporate causal links between formaldehyde exposure and disease outcomes, specifically asthma. The chapter closes with a focus on how the pharmaceuticalization (Keirns 2004, Biehl 2007, Whitmarsh 2008) of asthma facilitates the exclusion of environmental triggers, such as formaldehyde, from equations of disease

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<sup>45</sup> My one-sided focus on defensive techniques of weakening connections between chemical exposure and illness, as opposed to those intending to strengthen causal links, puts me at risk of accusations of what Woolgar and Pawluch (1985) refer to as “ontological gerrymandering,” or the asymmetrical leveling of critique. The unbalanced problematizations of this chapter result from a focus on the triumphant epistemic practices, which in the case at hand happens to be those of disavowal and disqualification. Michelle Murphy (2006) meticulously documented the dominance of these regimes of imperceptibility; my goal here in is to understand the processes by which such regimes are constituted.

causation. This unintentional and reductionistic facet of biomedicine's definition of asthma is then strategically utilized by a defense expert witness in court.

### **Forstalling Assessment**

In early spring of 2006, as many families were still moving into FEMA trailers, the Sierra Club circulated a press release about their grassroots indoor formaldehyde testing campaign and media attention to the issue began to mount. In response to press inquiries, a FEMA spokesperson announced in May, "FEMA and industry experts are monitoring the small number of cases where odors of formaldehyde have been reported, and we are confident that there is no ongoing risk." Behind the serenity of their official statements, FEMA was divided in planning their response to the issue. Since mid-March internal emails were circulating among FEMA field offices which advised an immediate and proactive response.

On May 18<sup>th</sup> a lawsuit, which would eventually swell to over seventy thousand plaintiffs, was filed in the Eastern District of Louisiana.<sup>46</sup> FEMA trial attorney Patrick "Rick" Edward Preston was assigned to the case in June and was simultaneously propelled to the forefront of FEMA's scientific inquiry into the formaldehyde issue (Minority Staff Report 2008: 10). One day after he was appointed to the litigation, Preston sent an email vetoing a swift evaluation:

Do not initiate testing until we give the OK. While I agree that we should conduct testing, we should not do so until we are fully prepared to respond to the results. Once you get results and should they indicate some problem, the clock is ticking on

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<sup>46</sup> Hillard vs. United States Government, Complaint, Civil Action 06-2576, U.S. District Court, Eastern District of Louisiana, filed on May 18, 2006. As of March 2013, the exact number of claims is still unknown. The Court-Appointed Disbursing Agent estimates that "the ultimate pool of claimants will be approximately 75,000 to 90,000 (although this is admittedly speculative)" (Special Master 2013).

our duty to respond to them.<sup>47</sup>

The institutional liability of scientifically verifying the hazards of chemical exposure outweighed such knowledge's utility in informing citizens or interdicting the corporeal risks of exposure that continued to accrue with time. This form of forestalling the scientific and systematic corroboration of FEMA trailer related illnesses was the first and most straightforward instance of the Agency's un-knowing of exposure.

In June 2006, FEMA, the Agency for Toxic Substances and Disease Registry (ATSDR), the Environmental Protection Agency (EPA), and the Centers for Disease Control and Prevention (CDC) began conducting biweekly interagency conference calls to address escalating public relations, public health, and litigation concerns. Through these calls it was eventually decided in August that the EPA would run tests in September and October of *unoccupied* trailers to test what methods of ventilation were most efficacious. At the time, environmental activist Becky Gillette, a central organizer of the Sierra Club's testing efforts, felt triumphant for garnering federal attention rather than weary of investigations shaped in part by FEMA. As she related to me in her Arkansas home in the spring of 2011, "I was happy when I heard the EPA was testing in October, I was glad that the professionals were coming in to verify."

Gillette's faith began to ebb as the New Year came and went and no results were made public, "they really dragged their feet and so I wrote a FOIA [Freedom of Information Act letter] in February to force them to release the results." While the EPA had conducted the tests, they had then delivered the data unanalyzed to FEMA who was then supposed to forward them to ATSDR for analysis. In early December of 2006 ATSDR was still awaiting delivery of the test results from Rick Preston's office.

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<sup>47</sup> Internal E-mail sent from Patrick Preston to Jill Igert, Jordan Fried, and Kevin Souza on June 15, 2006.

Soon thereafter Preston passed on the data with the stipulation that all ATSDR analyses would remain confidential. “No information should be released to any third party without my express permission,”<sup>48</sup> Preston mandated in an email to ATSDR. Duly, the report remained secret until FEMA issued a press release in May of 2007—three months after ATSDR sent its final report to Preston’s office and eight months after the tests were conducted. In addition to avoiding chemical assessment, secrecy was also utilized to the extent permissible by contemporary democratic structures.

### **Leveling Concern**

Setting the correct exposure threshold for FEMA trailers has been contentious from the start. When the Agency for Toxic Substances and Disease Registry (ATSDR) analyzed the potential hazards posed by the indoor air quality of unoccupied FEMA trailers in 2007, they disregarded their own intermediate (14-364 days) and long-term (> 1 year) formaldehyde minimum response levels of 0.03 ppm and 0.008 ppm, respectively. Instead, in drafting the report, the authors crafted their own standard, which they dubbed “the level of concern” (ATSDR 2007). The level of concern was set at 0.3 ppm—ten to thirty-seven times the concentration of formaldehyde that the Agency deemed capable of causing adverse health effects. This threshold is three times higher than the level the EPA, National Cancer Institute, and the Occupational Safety and Health Administration assert can cause not just irritation but coughing, skin rash, and severe allergic reactions.

According to former ATSDR director Howard Frumkin,<sup>49</sup> this level of concern bore

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<sup>48</sup> Internal E-mail sent from Patrick Preston to Scott Wright on November 30, 2006.

<sup>49</sup> Frumkin was reassigned to a position with less authority in 2010 as a result of multiple risk underrepresentation controversies, of which the FEMA trailers were the most notable (Sapien 2010a). He is generally credited with firing FEMA trailer consultation ‘whistleblower’ Frank Renda, who will be introduced shortly.

“little or no operational meaning” (Minority Staff Analysis 2008: 17). If even generally accepted thresholds of significance harbor enough uncertainties to beg the question, “for *whose* standards, and by what version of proof is a “standard of proof” determined or employed?” (Brown 1992: 275, emphasis in original), then this *ad hoc* threshold appears to be an even more urgent site of condensed politics. The 0.3 ppm level of concern dismissed the illnesses that more exacting guidelines were intended to prevent, labeling them mere “nuisance” symptoms. The Agency’s report found that by opening all windows, static vents, and exhaust fan vents, the indoor formaldehyde levels of FEMA trailers would, on average, fall below their “level of concern” and, therefore, the trailers should not be expected to produce adverse health effects (ibid).

This tidy conclusion served to, temporarily, quell rising concern about the chemical consequences of inhabiting a FEMA trailer. The study was designed not to assess the chemical levels of FEMA trailers in the state in which people lived but rather to see if it was possible to bring the indoor formaldehyde levels within a “safe” range. The conclusion of safety was based upon a best-case scenario that was inappropriate for brutal Gulf Coast summers, when trailer windows need to be closed and air conditioning set at full tilt in order to fend-off withering heat and humidity.

Frank Renda, then a senior environmental scientist at ATSDR, was alarmed by the report when it landed on his desk for approval:

[The consultation] was dated February 1st [2007], I saw it on about the 17th of February; within about two hours I called my senior management and said that we had a problem. The consultation as it was written was misleading, possibly misleading, and a potential public health threat.

As Renda recalled over lunch in Atlanta in 2011, he traced the study design’s lineage to the FEMA attorney, Rick Preston, who requested ATSDR analysis:

They had been directed by FEMA first of all not to share it with anyone [and secondly] that they were only to address the shorter term. That was the thing, I didn't have to go into any in-depth review to know that we had missed the boat, we missed the mark, that FEMA had gotten what they had asked for.

Renda's technical misgivings and the patent influence of a lawyer managing FEMA's liability did not move Renda's superiors into amending the consultation. The report was sent to FEMA and only resurfaced later in the summer when, in Renda's words, "things began to break loose."

In May the report was used in a FEMA press release to justify inaction.<sup>50</sup> Following this revived attention, the two junior scientists that penned the consultation were raked over the coals by senior management. ATSDR's senior leadership then turned to Renda and asked him to lead an across-Agency work group to develop recommendations for remediating the report. Renda's committee produced a revised document that bore increased precautions:

One of the points stated, "given the hazards posed by the trailers and the formaldehyde exposures, that efforts should be undertaken in the areas of health education and that appropriate measures to interdict exposures should be implemented." And after that there was all of a sudden some sudden displeasure with that I had done. It was removed from my oversight and the executive summary was revised to say, "analyze" as opposed to "implement." Paralysis by analysis.

Renda was removed from his role supervising the revision of the FEMA trailer consultation. Ten days after he wrote this memo Renda received verbal word that he had been given an unsatisfactory professional evaluation. He recounted the sequence of events as follows:

I was on my way to Italy. I am a member of something called the Collegium Ramazzini [an elite academy of 180 environmental and occupational health scientists] and I was there with my father. His parents had come as immigrants from Italy around the 1900s and he had never been [to Italy] and I get to take a guest so I said, 'why don't you come as my

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<sup>50</sup> The press release is available at: <http://www.fema.gov/news/newsrelease.fema?id=36010>, issued on May 4<sup>th</sup> 2007. Release Number: HQ-07-061

quest?’ We were at the final awards ceremony and I was approached by one of my managers with a double blue folder: one side is my unsatisfactory evaluation and the other side is my notice of removal. My father is there, my colleagues are there, seeing all of this. So that was complicated.

I asked if being made redundant in such a public and poignant manner was a strategically disheartening move. Renda took a deep breath and, with his right index finger, began tracing the outline of the metal links on his watch, “I think it could be construed to be mean spirited. But uh, I can’t say that with certainty. So that would be a construct that others would have to...” He trailed off as his eyes welled up behind his metal-rimmed glasses, and his lips bowed out, holding back his opinion. One of the conditions of his termination settlement was that he was to say nothing negative about the Agency.

Once removed from his position at ATSDR, Renda was placed on “a performance improvement plan”—a slow, bureaucratic means of firing. As he waited for his motion of wrongful removal to be processed through the court, he was repeatedly reassigned to different offices. “I ended up in an office in a new building with limited ventilation,” He recalled, “I complained against the air quality and it turned out by their own measurements by *their* hygienist, the levels of formaldehyde were twice the recommended limit by the National Institute of Occupational Safety. [...] I was developing rashes [of] which I still have some.” In a back office of the National Center for Environmental Health, Renda was slowly infused with the chemical that cost him his job. The substance he was reprimanded for taking precaution against seeped back into his life, more materially than ever. Formaldehyde has left its mark on his career and his corpus. He was struggling to right his toppled professional life when I last saw him in 2011.<sup>51</sup>

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<sup>51</sup> Backlash against scientists like Renda that questioned inconclusive findings and other forms institutional pressure to overturn chemical exposure concerns are not limited to ATSDR. See for further examples: Brown 1992: 275 and Freudenberg 1984: 57.

Further criticism was leveled against the 0.3ppm “level of concern” by Dr Vincent Garry, a pathologist and reviewer of ATSDR’s 1999 Toxicological profile on Formaldehyde. In a March 2008 letter to Representative Brad Miller, Chairman of the Subcommittee on Investigations and Oversight, Garry pointed out the inapplicability of such a threshold of concern because of the authors’ reliance on occupational exposure studies which are based upon eight hours of exposure per day for five days a week, whereas, for many trailer residents, “this is a 24 hr per day 7 days per week exposure” (Garry 2008: 1). In addition to disjunctures between the exposure durations of the industrial exposure literature drawn upon and the residential case to which it was applied, Garry noted the physiological differences between the largely healthy adult males that composed the occupational studies and the wide-ranging biological makeup of trailer inhabitants, “For example, children under age 2 have a short trachea and breathe faster than adults (30- 40 breaths per minute), therefore, process more formaldehyde into the body and are probably less efficient in the metabolism of the chemical” (ibid). He concludes his letter by diagnosing a lack of peer-reviewing and robust intra-Agency communication as the underlying issue that led to the usage of this technical miscalculation as the central benchmark in ATSDR’s report.

These issues, highlighted by Garry and Renda, are not isolated to this particular health consultation but rather are symptoms of a longstanding lack of oversight and shortcomings in study design. Such underestimations of harm are the result of techniques of toxicological investigation employed by ATSDR since its creation. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) seeded the agency in 1980 to assess potential adverse human health outcomes related to nationally identified toxic waste sites, yet the Agency was not materialized until 1983.

With the budget cuts that befell many governmental programs under the Reagan

administration (1981-1989), ATSDR financing was stymied by its three tributary sources—the Office of Management and Budget, EPA, and the Department of Health and Human Services (ATSDR Staff Report 2009: 2-3). As the Agency struggled into existence, it made very little headway on its designated duties of investigating toxic exposures. To get the Agency moving, a congressional mandate in 1986 gave ATSDR a two-year deadline to complete 950 health assessments. This unattainable goal yielded the practice of “arm chair” toxicology and the recycling of outdated data in order to produce almost two assessments per working day.

From its early days in the 1980s through to the present, the Agency has been accumulating complaints regarding the irresolution of their toxic exposure assessments. The U.S. General Accounting Office, in a 1991 review, found ATSDR’s results to be “seriously deficient as public health analyses” (GAO 1991: 2). The Environmental Health Network and the National Toxins Campaign Fund asserted in a 1992 study that ATSDR’s studies were “inconclusive by design,” elucidating their argument with multiple accounts of toxic exposures in the Gulf Coast that were deemed by ATSDR to pose no health risk (Russell et al. 1992). Corroborating this statement, one current ATSDR scientist, bearing witness anonymously, testified that, “It seems like the goal is to disprove the communities’ concerns rather than actually trying to prove exposures” (Subcommittee on Investigations and Oversight 2009: 2).

The technical means of disavowing the potential chemical harm of these emergency housing units falls squarely within a domain of inquiry that the French philosopher Michel Foucault referred to as “subjugated knowledges”; knowledges “that have been disqualified as nonconceptual knowledges, as insufficiently elaborated knowledges [...] that are below the

required level of erudition or scientificity” (Foucault 2003: 7). The 0.3 ppm level of concern disqualifies the “nuisance” effects of formaldehyde exposure as non-conceptual. It submerges the constant headaches, fatigue, rashes, coughing, and diarrhea experienced by FEMA trailer residents under an ostensibly higher level of scientificity, disavowing their reality as a true or significant health consequence of exposure. Not only are knowledges subjected, but, like Renda, so are those advancing such knowledge.

Scholars of intentional ignorance have drawn upon Foucault’s work, often citing their study as the under-explored and corresponding pole of Foucault’s analyses on the struggles of power/truth production (McGoey 2007: 217; Mathews 2005, Graeber 2006: 4). Indeed, power/ignorance is the obscured face of the same coin that Foucault identified as vital currency in the exercise of power. But Foucault’s contribution to understanding the unknown is greater than merely analyzing ignorance’s antipode. The subjugation of knowledges is a vital means of conceptualizing the technical erasure of perceived hazards as it moves beyond the knowledge avoidance of power/ignorance. In the case at hand, these analytics prove to be complementary.

The EPA-collected data on trailers that were ventilated to an extent beyond practical possibility was an apparatus of hazardous knowledge avoidance, while the parameter of analysis—‘the level of concern’—was a technical instrument of subjugation. The threshold and the policy decisions it informed subjected tens, if not hundreds, of thousands of Gulf Coast residents to sustained formaldehyde exposures, for “at least one year longer than necessary” (Minority Staff Report 2008: 1). It further dismissed the existing scientific recommendations for maximum domestic formaldehyde concentrations—including those of ATSDR itself—as overly precautionary and attempted to mask the hazards manifest in the exposure data it was charged with adjudicating. These technical maneuvers are tempered

by the Agency's distinct history of evaporating concerns about the public's cohabitation with toxics, privileging liabilities of fellow federal agencies and industry over population health.

### **Arguing Asthma**

This section moves from an analysis of the often-blunt means of liability avoidance, deferral, or disqualification deployed as techniques of governance, to attend to the more indirect ways through which scientific ambiguity and inconclusivity is leveraged vis-à-vis the ever-shifting ontology of the 'expert witness.' This is documented through an exemplary test case, technically known as a "bellwether trial." The bellwether trial of focus pivoted around the exacerbation of asthma by formaldehyde exposure. Asthma exacerbation or causation is a primary complaint of the plaintiffs. Reflective of the complexity and ambiguity of their claims, plaintiffs are rallying around a disease—asthma—that "has no standard definition" (Tattersfield et al. 2002: 1313).

In 2006 and 2008 the editors of *The Lancet* proposed we "abolish the term asthma altogether" for, they asserted, this descriptor functions as a "straightjacket," constraining a multiplicity of manifestations, pathological processes, and etiologies (*The Lancet* 2006: 705). They further suggest that, like the conceptualization of fever as a disease that prevailed until the 19<sup>th</sup> century, asthma may simply be a shared symptom of an array of discrete disorders. Within these special issues dedicated to advances in asthma science, one leading researcher noted that in the clinic it is "as if each [asthmatic] person is an n of one" (Harding 2006: 725), meaning that each individual case of asthma appears to be a distinct disease unto itself. In the clinic and in the discussion space produced by international scientific journals, serious doubt has been cast upon the cohesion of the term asthma.

In *The Body Multiple*, Annemarie Mol (2002) unpacks the array of medical practices

that are funneled into the diagnosis of atherosclerosis in a Dutch hospital. She found that the ontology of this vascular disease changed across wings of the hospital, yet were coordinated into a single disease. Multiple biomedical realities are enacted into a single biological affliction. However, unlike the unification of atherosclerosis' multiplicity, the various components of defining asthma are not systematically brought together. The biomedical category of asthma suffers from an ontological coordination disorder. Doctors themselves are aware of the multiplicity of asthma diagnostic criteria at play in the different wings of biomedical practice (Peat et al. 2001: 406). This contested definition of what asthma *is* allows for a multitude of presentations in courtroom.

While Mol tracked protean ontologies in the hospital, I am investigating a very different set of spaces, that of the courtroom, law firm, and deposition meeting room. Here clinicians, toxicologists, and industrial hygienists sit and speak of their actions. Expert witnesses transport descriptions of medical and scientific practice into litigious spaces where the ontology of medical objects has high stakes for not just individual patients like in the clinic, but for tens of thousands of plaintiffs and the large assortment of defendants.

In this context the theoretical awareness of the complexity and pitfalls of the term 'asthma' are not used as evidence in the testimony of the medical practitioners. Rather, the plaintiff and defense expert witnesses enact asthma in very different ways. Although their conceptualizations of asthma diverge, and are at times antithetical, expert witnesses from both sides avoid referencing asthma as an ambiguous concept; they depict asthma as clear and known. The trial of focus here revolves around Christopher Cooper, who was 8-years old when Katrina hit and the flood protection system of New Orleans failed, destroying his family home.

Christopher grew up in New Orleans East with his mother, Alana, and older sister,

Erika. Up until the levees broke in 2005, they lived in a house built by his maternal grandfather. His grandparents ran the barbershop directly next door to their family home. Christopher was diagnosed with asthma when he was three. This bellwether trial revolves around the exacerbation of Christopher's asthma and was selected to be representative of large number of plaintiffs with similar ailments. I worked on a subsequent case that dealt with adult asthma causation, oral tumor growth, and depression that presented similar epistemological techniques in the courtroom. I selected this case, out of many others reviewed, for several reasons. First, exacerbation is more illustrative of uneventful harm than discrete disease causation. Second, children were more susceptible to exposure-related harm, and finally, because a childhood case was largely free of the of the murky science of forensic psychology and the manipulation of personal histories or co-morbidities.

Since his diagnosis, Christopher would use his corticosteroid "rescue" inhaler one or two times a month when he found himself gasping for breath during, mostly sports-induced, asthma attacks.

Q. How did the asthma affect what you did on a daily basis before the hurricane?

A. Well, when I go outside and play with Ms. Donna's children [the children of his mother's best friend], I will sometimes get a little wheezy and I have to maybe stop and just wait for a while so I can go back and play.

Q. When you got wheezy, did you have to use your inhaler?

A. Yes, or I might just want to stay inside. [...]

Q. How did you feel when you were having an asthma attack?

A. I would kind of feel tired and, like, I would just, like, want to go in my bed and go to sleep.

Q. Did the asthma attack make it hard to breathe?

A. Yes.

Q. Did that scare you?

A. Yes, it did.

Q. When you had asthma attacks before the hurricane, did you have any concerns about how it was going to affect your health?

A. No.

Q. So what scared you about the asthma attack?

A. That I might die. (New Orleans, 29th of June 2009)

As the seasons changed Christopher's asthma would "flare up." He averaged two asthma-related hospitalizations a year: one on the way into winter and one on the way out. After the hurricane and six-months of displacement in Florida, Christopher, his mother, and his older sister moved into a FEMA trailer parked in the driveway of their flooded home. Soon thereafter, the frequency of Chris' asthma attacks increased fourfold. This worsening of his asthma is the basis of Chris' litigious claim for redress.

Dr Kenneth Smith is the director of the intensive care unit at East Jefferson General Hospital, just West of New Orleans, and a practicing respiratory disease specialist with Jefferson Pulmonary Associates. Smith was hired by the defense council of the FEMA trailer formaldehyde litigation to refute claims of both general formaldehyde-asthma causation (*can x cause y*) and the specific causation of the exacerbated asthma of Christopher Cooper (*did this x cause this y*). In the following excerpt from his deposition, a plaintiff attorney asked Smith whether a series of statements were true or false—a line of questioning often used to establish the baseline opinions of expert witnesses:

Q. First statement: There's a cause-and-effect relation between formaldehyde and asthma.

A. That's a qualified maybe.

Q. Is there a cause-and-effect relationship between formaldehyde and initiation of asthma?

A. Possibly.

Q. Formaldehyde is an irritant to the respiratory system?

A. Possibly. Again, these are all concentration issues. They are potential irritants at the appropriate concentration. We've seen several patients who lived temporarily in FEMA trailers that have asthma and have other illnesses. But that [allergen and toxin exposure] was a very common occurrence in this city after Katrina. [...]

Q. Formaldehyde exposure can have harmful effects on developing lungs in children?

A. I would say that I'm unaware of any data that would suggest that that is the case.

Q. So is that a no?

A. That's a qualified no because I'm unaware of it. (Metairie, Louisiana, 10<sup>th</sup> of July 2009)

This strained back and forth continued on for several minutes. To questions revolving around whether or not the scientific literature demonstrated that low-dose formaldehyde exposure can exacerbate asthma, Smith responded “maybe,” “possibly,” “I'm unaware of it.” He also, and to a lesser extent, answered with, “false.”

The latter was his ruling on the statement, “There is a correlation between formaldehyde exposure and the risk of allergic sensitization.” Allergic sensitization is one of three pathophysiological links between formaldehyde exposure and asthma attacks. The connection between formaldehyde and allergic sensitization is well established and uncontroversial (Wantke et al. 1996, Garrett et al. 1999). After Smith’s firm negative answer, the questioning attorney pressed further:

Q. A definitive not true or you haven't seen any studies that suggest that?

A. I haven't seen any studies that suggest that, and the studies that I have seen suggest that that's not the case.

In Smith’s list of reliance materials, a technical term for everything that he has consulted in formulating his opinion, he listed only seven articles. Of these articles none were studies that scrutinize allergic sensitization in the presence of formaldehyde, and most had little to no bearing upon the trial’s claimed concurrence of FEMA trailer residency and childhood asthma exacerbation. Smith produced a firm account of causal uncertainty through his listless engagement with the scientific literature, a technique of resenting political matters as technical matters that sociologists of science and law have dubbed “performing closure” (Lynch et al. 2008: 228).

Smith's window upon the scientific literature was not just small but also strategically sculpted, as evidenced through his responses to questions from the plaintiff attorney:

Q. The studies that you reviewed that are in your Reliance File, how did you get those? Did you go out and hit the books or hit the computer or did the lawyers provide them? Did someone else provide them to you?

A. Most of the -- the documents that I referenced in my opinion paper, except the ones for Up-To-Date, which is an on-line textbook, mega textbook --

Q. Sure.

A. -- were provided by defense counsel.

Thus, Smith did not produce his expert opinion alone. The intentional ignorance of Smith's testimony is shaped by the tandem efforts of defense attorneys' strategically sanitized reading list and his own restrained research. By way of this combined effort, Smith was able to achieve plausible deniability. He was able to aver, without fear of perjury, formaldehyde's non-causation of asthma. It was through this calibrated epistemic avoidance that his testimony achieved an ontological fixity of the non-existence of a relationship between formaldehyde and asthma. In interview, a plaintiff expert witness who asked to not to be identified by his scientific specialty and only sparingly quoted, averred that a "close coordination" between scientist and lawyer was the key to winning cases. He felt that the acquittal of the defendants in this case was largely due to an "abysmal" job of lawyer-scientist coordination on the side of the plaintiffs (See Chapter 3).

Smith's claims were further buttressed by demarcating his expertise: "I'm not a study wonk", he remarked as a plaintiff attorney questioned him about exactly what study it was that refuted sensitization to formaldehyde. Smith continued, when an attorney pressed him on the specifics of a study, "That's not my deal. I'm a clinician." Smith has treated at least 50,000 patients with respiratory ailments since he finished his training in 1978. He centered his expertise upon his capabilities and knowledge in practice and not his methods of literature

inquiry or memory of textual specificities. Despite his assertions of hands-on as opposed to book knowledge he reported that not a single one of his patients claimed formaldehyde-induced asthma aggravation.<sup>52</sup>

Contradictorily, however, Smith later stated that his clinical instinct is not what he relies upon. When asked how he formulates his opinions Smith circled back to the literature, which is in conflict with his clinical commonsense:

Well, it's based on my personal experience, but it's also based on literature and people that have done this. You know, quite frankly, quite frankly, I -- I would have thought intuitively, intuitively that any irritant can -- can exacerbate asthma. All right? If you ask me as a clinician, I'd say, yeah, virtually any irritant. So it was real interesting to me as a -- as a scientist to -- to read literature that's from good places that seem to be good literature where that in fact is not the case [...]--that's somewhat surprising, quite frankly. But I believe it.

Smith did not base his expert opinion of formaldehyde-induced asthma exacerbation on what he saw day-in-and-day-out as a clinician, nor did he claim to base his views on the literature alone. Rather, he coordinated his authority between clinic and library—practicing pulmonologist and scientist. This movement “ontologically choreographed” (Cussins 1996) Smith’s different claims on expertise; i.e., he forged “a functional zone of compatibility that maintain[ed] referential power between” his different medical existences (Cussins 1996: 600). Smith’s dogged coordination of his expertise deflected further cross-examination from plaintiff attorneys and his expertise was not called into question by the presiding judge.

Smith’s expertise arose from a repeated oscillation between the clinical and the

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<sup>52</sup> Larger pedagogical issues may feed into Smith’s lack of clinical experience with formaldehyde related asthma issues. As toxicologist Francesca Daniels PhD DABT (introduced in the following chapter) asserted to me in interview, “most MD’s are not trained to recognize the environmental or occupational etiology. [...] once you get outside some of these classic older etiologies of environmental exposures and occupational diseases, they’re lost. They just haven’t been trained. And they are not trained to do an environmental history or an occupational history.”

scholarly, yet as he jockeyed back and forth he persistently located the seat of his knowledge in his *other* medical existence. Behind the ontological choreography of Smith's expertise that sufficed to maintain his legitimacy in court, was a deep-seated "phantomatic" quality to the ontology of his expertise. In her work on waterborne single-celled microorganisms that were simultaneously the suspected and vindicated culprit of large-scale fish die-offs, Astrid Schrader developed the notion of "phantomatic ontology." While the term was coined to describe scientific objects that "reshape their configurations in different contexts" (Schrader 2010: 278), I extend it here to the producers, or at least brokers, of scientific knowledge who's own expertise bears "the paradoxical existence of a specter as neither being nor non-being" (ibid).

Smith coordinated his polyvalent expertise to successfully shield his data avoidance from contempt and vulnerability. Yet, on closer inspection the ontology of his expertise that was so readily choreographed, also revealed the vacancy of his epistemic practices. As Lezaun and Woolgar (2013: 321-323) note, ontology and epistemology are not easily parsed. Both are implicated and entangled within broader practices of un-knowing links between formaldehyde and asthma.

Patricia Williams, PhD, and Director of the Occupational Toxicology Outreach Program at the University of New Orleans, was hired by the plaintiffs to buttress claims of formaldehyde exposure asthma exacerbation. While Smith advanced his stance that formaldehyde and asthma bore little to no causal relationship via his assessments of population level studies, Williams enacts the opposite opinion at a molecular register. She justifies her move from epidemiology to micro-physiology and chemistry by citing a "vacuum" of data on long-term formaldehyde inhalation at low doses. This data dearth is especially acute surrounding non-normative groups such as the immunocompromised, the

elderly, and children. Not only are these epidemiological studies not done, Williams asserts that experimental studies on this topic should not be done to compensate for this lack of real world evidence. She cites ethical concerns about the laboratory provocation of asthma attacks in sensitive populations. The ethical limits of experimental science underlies the knowledge gap between what is mechanistically likely and what is empirically proven.

As the defense lawyers continued to question her on the lack of experimental data that links asthma attacks to formaldehyde, Williams circles back to other ways of knowing and lists the three causal pathways of formaldehyde-induced asthma as evidence enough.

Q. As we sit here today, experimentally it has not been proven that formaldehyde causes asthma, has it?

A. Yes, it has.

Q. In what human study?

A. Asthma is asthma. Asthma is bronchoconstriction. You have a host – we know it certainly acts with the trigeminal-vagal reflex. We know that. We know that it increases the nitric oxide. When you say asthma, you are not saying which of those three mechanisms is in effect, IgE or trigeminal-vagal or the nitrogen oxide synthase mechanisms. We know -- there are many studies, we know that it [formaldehyde] can cause asthma. (New Orleans 3rd of December 2009)<sup>53</sup>

*Asthma is asthma. Asthma is bronchoconstriction.* Williams attempts to cut through the academic medical discourse on the multiplicity of asthma. For her, studies that link the mechanisms of asthma attack to formaldehyde are equivalent to experimental evidence deduced by exposing human subjects in the lab. The molecular possibility of asthma, for her,

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<sup>53</sup> Explanations of the three mechanisms 1) IgE is Immunoglobulin E and believed to be a key agent in allergic and hypersensitivity responses. Upon initial exposure, formaldehyde-specific IgE antibodies are produced and circulated in the blood stream. Due to elevated levels of corresponding IgE, the subsequent reentry of formaldehyde into the body can lead to an aggressive and rapid immunological response, yielding a large histamine release and resulting in inflammation and bronchoconstriction (Wantke et al. 2006). 2) The trigeminal-vagal reflex is relates to nerves that weave into the mucus membrane of the nasal passageway (the trigeminal) and innervate the lungs. When an irritant is detected in the upper airway a signal is sent through brain to the lungs to decrease the respiratory rate and contract the smooth muscle surrounding the bronchial tubes. 3) The oxide synthase mechanism refers to the enzymatic connection formaldehyde and asthma. The primary molecular defense against formaldehyde is an enzyme that bears receptor sites identical to those of the enzyme responsible for regulating an important bronchodilator. This means that formaldehyde binds not only to the enzyme that destroys it, but also to an enzyme that is responsible for keeping the bronchial passageways open (Henderson & Gaston 2006).

is tantamount to asthma itself. If “asthma is asthma,” then the multiplicity of pathways does not blur the boundaries of asthma but rather, reinforce them. Asthma, in Williams’ testimony is both a singular pathophysiology, bronchoconstriction, and—in the case of formaldehyde—a triad of mechanisms. Contrary to the discursive crisis of asthma’s nebulous definition, she fosters an ontological fixity of asthma exacerbation. She disassembles the definition of asthma to the lowest common denominator, bronchoconstriction. It is through this technique of rendering what asthma *is*, of managing the polyvalence of formaldehyde-asthma causal pathways and the heterogeneity of the disease’s ontology, that Williams articulates a basis for her assertion of general causation. Whereas Williams grooms the polyvalence of asthma causation to strengthen her testimony, Smith grooms the polyvalence of his expertness to justify his evasion of the literature.

### **Pharmaceutical Logics**

In the move from speaking about general causation to specific causation, Smith repositions himself as a clinician. While he concedes that Christopher Cooper did experience more frequent attacks with greater severity while living in the FEMA travel trailer, he does not “know specifically what caused it.” He frays the claimed etiology of formaldehyde exposure not only with his “will to ignorance” (McGoey: 2007) but also with his clinical knowledge of asthma provocation. As with his testimony negating the general causality of asthma by formaldehyde, these accounts of specific causality are also produced by drawing upon an emergent pharmacological re-definition of asthma’s etiology. This section transitions from an analysis of the likely intentional ignorance of expert witnessing to pervasive biomedical logics that are without personal intent yet are also braided into processes of unknowing, specifically the exclusion of environmental exposures from definitions of asthma.

In May of 2009, Christopher Cooper and his mother, Alana Alexander, traveled to National Jewish Hospital on a trip paid for by the plaintiff steering committee. The respiratory wing of this hospital is widely regarded as a global leader in pulmonary care. There, Dr Karen A. Pacheco ran a battery of tests on Christopher: pulmonary function tests, a challenge with a bronchoconstrictive agent, skin-prick allergy testing, and CT scans of his sinuses & chest. In her affidavit she concludes that it is “medically plausible that [Christopher’s] asthma would have been aggravated by occupancy of a water damaged trailer with formaldehyde off-gassing” (2009: 7) but given the lack of baseline medical records (many of which were lost to the 2005 flood waters) she cannot attest to the precise degree of aggravation. “Nonetheless,” she continues:

The patient’s test results document moderately severe bronchial hyperresponsiveness as well as a component of fixed airflow obstruction. This likely reflects a long history of asthma that has been suboptimally treated. Although it is common to wish to minimize medication use, especially in children, in those with asthma this is not necessarily a good policy. Chronic untreated asthma can lead to airways remodeling and scarring, with fixed airflow obstruction that no longer completely reverses with inhaled bronchodilator. (Pacheco 2009: 7)

Pacheco reads Christopher’s pulmonary landscape as sculpted by a longstanding lack of pharmaceutical intervention. This explanation of Christopher’s current airway topography falls in line with an even longer history of the biomedical imagination’s use of asthma pharmaceuticals to subtract environmental factors from equations of asthma causation or exacerbation.

In his wide-ranging history of asthma and allergies in the US, Gregg Mitman notes that following the conclusion of the Second World War, “engineering the body in ways that would overcome the peculiarities of place and environmental change became a consumer and

corporate dream” (2007: 211). In other words, bronchodilating inhalers were used to replace considerations of environmental exposures when thinking about asthma or allergies. This shift in the way asthma was conceptualized aligned the interests of patients-cum-consumers and the pharmaceutical industry and obfuscated many of the underlying environmental triggers. Ian Whitmarsh also notes that, “increasingly in the early-twentieth-century United States, pharmaceutical intervention was used to define [asthma]” (Whitmarsh 2008: 61, drawing on Keirns 2004). Alleviation of bronchoconstriction by inhaled pharmaceuticals became foundational in defining what respiratory illnesses were identifiable as asthma. It is upon this foundation that lack of treatment becomes more of a cause of asthma than the environment. In a circular fashion, the treatment of asthma has seeped into its definition, and a lack of treatment has become the cause of asthmatic damage to the lungs. The original impetus for respiratory distress and pharmaceutical innovation, the environment, is displaced by its response. It is under this rubric of pharmaceuticalization (Biehl 2007), that we must understand the assignation of non-environmental causality.

Only Pacheco’s affidavit appears in court, not her person. Her expert report is brought in as an exhibit and then, as an expert witness, Smith translates her medical terminology into more accessible English. At the beginning of his analysis he pauses to “applaud” her reading of Christopher’s severe bronchial hyperresponsiveness and fixed airflow obstruction as a function of a lack of pharmaceutical intervention rather than the result of a pathophysiology exacerbated by environmental substances. Indeed, Christopher’s (and his mother’s) responsibility for the changes to his airways is, Smith posits, evinced by “[t]he fact that he has no alteration in forced expiratory volume in one second that doesn’t go normal after the use of a bronchodilator.” In other words, how much air he can exhale at a baseline is the same as how much air he can exhale immediately after a chemically triggered bronchoconstriction

is countered by a fast-acting asthma inhaler. Christopher's test responses place his bronchial sensitivity snugly within the pharmaceuticalized definition of asthma. He should, therefore, be able to remove environmental encounters with asthmogens from asthma's causal horizon.

Contra Williams' assertion that "asthma is bronchoconstriction," Smith implies below that pathophysiologies are not asthma; they are merely risk factors for asthma. Asthma becomes a lack of human control of bodily risks in Smith's testimony, "Christopher actually has mild asthma. He has severe bronchial hyperresponsiveness which may put him at risk for more severe asthma or may -- if he's not controlled, he may -- he could have long-term sequelae." Christopher's asthma is itself mild, although his lungs are very reactive. The control necessary to prevent "more severe asthma" is a control of Christopher and not a control of the environment. As Smith renders the ontology of asthma, asthma is not in the body or influenced by the body's surroundings but rather comes into being by how one medicates or does not sufficiently medicate the body.

In his expert testimony, Smith takes the helm of diffuse practices of pharmaceuticalization and aligns their logics with his own argument. Yet, the momentum of such unwieldy processes affords only minimal maneuverability. The primary agency of separating environmental asthma triggers from rubrics of causation lies beyond individual or institutional agency, as outlined in previous sections, and resides in scientific discourse itself. These pharmaceutical logics are the largest scale and most de-centered aspect of un-knowing documented in this chapter. While this instance of pharmaceuticalization is without distinct architects or authors, it is directly in the service of corporate power and profit by drumming up pharmaceutical consumption. Its invocation in this case signals the cross-industry synergy of corporate means to knowing and un-knowing.

## Conclusion

In this chapter I have enumerated a compendium of techniques of un-knowing as they emerged at the interface of the post-disaster governance, law, and the health sciences. In doing so I hope to contribute a toolbox of approaches to the growing body of work on intentional ignorance that is developing in STS and render visible the ways in which socio-legal venues and practices mediate the un-knowing of evidence.

The practices of un-knowing illnesses in the ill-fated emergency housing units of study are mercurial. They take multiple forms across scale and time, including: secrecy, assessment postponement, scientific disqualification/knowledge subjugation, knowledge avoidance, and the ontological obfuscation of environmental triggers.

The above techniques weave together to form the process I have dubbed “un-knowing.” Un-knowing answers the technical question “how did regimes of imperceptibility come to veil the potential harm of formaldehyde in FEMA trailers?” By documenting the ways in which knowledge can be parried, submerged under thresholds of significance, concealed, and ignored. While the STS literature on “strategic ignorance” semantically imputes intentionality, a focus on processes of un-knowing highlights how willful knowledge insufficiencies and unpremeditated discursive blinders, such as pharmaceuticalization, work hand-in-hand and towards similar ends.

## CHAPTER 3

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### Enduring Exposure: Abandonment, Law, and the Eclipsing of Biological Citizenship

There will be a little bit of New Orleans everywhere when our refugees move into your communities. Here are some of the changes: [...]

You will no longer experience any faith in your government — if you still have any. Our refugees will teach you how to be self-reliant, depend on your community and live without any faith in the government.

-Andrei Codrescu (2005)

When I began this research, I was confident I was on the heels of a specifically American capitalistic mode of what Adriana Petryna calls “biological citizenship,” a process denoting the use of damaged biology to establish or re-articulate the entitlements of citizenship (2002). My doctoral and funding applications all pivoted around this concept and the claims process used to assess the grievances of the putatively injured. Yet, my pre-field hypothesis was fundamentally flawed, and tellingly so. In this chapter I discuss why it is that the rubric of biological citizenship is not germane to the faltering claims process of the FEMA trailer formaldehyde litigation, and perhaps more general attempts to be compensated for chronic uneventful harm. In the Gulf south, the hope of becoming a biological citizen has been hollowed out by both the “economies of abandonment” (Povinelli 2011) that structure the aspirations of neoliberal subjects and the form of wounding that fell short of obligating action and accountability.<sup>54</sup>

Over the course of two years of fieldwork, it has become patent that the FEMA trailer

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<sup>54</sup> Conventionally, the moniker ‘neoliberal’ bundles multiple ideologies: (neo)conservative, liberalism, and/or free market thinking. My use of the neoliberal is as it relates to as a series of complex relationships—ones in which the state has ceded some of its responsibilities to the market and accountabilities are more open-ended as a result deregulation.

toxic tort was not a coherent attempt at restoring an impaired citizenship. Rather, the litigation—which stood as the only tenable avenue for recompense or welfare—became a small gesture of disappointment long before it ultimately concluded in a paltry settlement. I argue that plaintiffs in the FEMA trailer toxic tort litigation never invested or had divested their hopes for justice, let alone survival, from the outcome of this product liability case. In sum, the process of litigation and perceived abdication by the state aroused sentiments and suspicions that discouraged buying-in to the promissory rhetoric of mass tort (*cf* Ewick & Silbey 1998).

Citizenship is always an active endeavor. Biological citizenship is no exception: it “is a hopeful domain of activity, one that depends upon and intensifies the hope that the science of the present will bring about cures or treatments [or redress] in the near future” (Rose & Novas 2004: 452).<sup>55</sup> It is a forward-looking pursuit, expectant that the current procedures will yield some sort of improvement in the future anterior, be it post-mortem money for one’s next of kin, medico-scientific advances, or meager monthly payouts that tip the scales—ever so slightly—towards survival. This is not the case with former FEMA trailer inhabitants seeking answers about and redress for their spectrum of illnesses.

Sick FEMA trailer residents are not orientated towards the proximate future but are steadfastly bound to the present perfect, bracing for the aftershocks of both natural disaster and chemical exposure. While science and technology scholar Anne Pollock finds a “lack of expectations of the state” to be substantive of “a distinctly American biological citizenship”

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<sup>55</sup> Rose & Novas’s formulation of biological citizenship is not equivalent to that of Petryna. The former is a supra-national form of citizenship often reserved for advocate patients and the latter is a means of perseverance and subsistence for the injured masses. Yet, the use of this quotation to speak to Petryna’s biocitizenship—which is the biocitizenship of focus in this thesis—is not specious. A common fuel of hopefulness drives both social processes. Even when recapturing health was out of the question, Petryna’s biocitizens bore some hope that future benefit will come to them or their families in the form of government entitlements (Petryna 2002: 215). Also see Michel Murphy on hope and biocitizenship, (Murphy 2008: 699).

(Pollock Under Review: 24)<sup>56</sup> in her Mississippi case study, I believe such forlorn sentiments undermine the analytical importance of biological citizenship amongst marginalized and chemically damaged people of my case study. Without more than momentary hope or investment in science or the claims process that rules over the admissibility of plural scientific readings, biological citizenship is experientially irrelevant.

Rapidly, the righteous mobilization of ill FEMA trailer residents was overshadowed by what Vincanne Adams et al. refer to as “chronic disaster syndrome” (Adams et al. 2009, Adams et al. 2011, Adams 2012). Adams and her colleagues developed the concept of chronic disaster syndrome while studying the attritional conditions of post-Katrina life in New Orleans. They witnessed the effects of the acute disaster stretch across durative timelines, lingering long beyond the end of official declarations of emergency and the presence of relief organizations. Local and state legislators stripped back social welfare infrastructures after the storms. For many, hopes of a return to normalcy became hobbled by the endurance of multiple and overlapping impasses.

Adams et al. document how protracted insurance settlements, stalled rebuilding grants, reduced opportunities for employment, and decreased access to health care collectively culminated in chronic health issues for some New Orleanians and dispirited many more. An aspect of the enervation of post-Katrina life, its sapping of energy and vitality, derives from the way in which traumatic events hemorrhage into everyday life (Das 2007). Yet, the weakening of hopeful dispositions is *not* fully the result of the exceptional nature of catastrophe, a rupture or re-direction of social trajectories.

As many scholars have noted, and as I will detail later, the storm and its effects were less of a departure from the status quo and more of an acceleration of the exclusionary

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<sup>56</sup> Cited with permission.

economic structures that pre-dated Hurricane Katrina in the Gulf South (Bakker et al. 2005; Bullard & Wright 2009; Johnson 2011). Adams et al. acknowledge that the dismantling of social welfare infrastructures after the storm, where were praised by neoliberal pundits as social and economic improvements, exacerbated chronic disaster syndrome (2009: 626-629). I take this economic argument one step further and argue that New Orleans' chronic disaster syndrome is itself a symptom of—and perhaps a more visible forerunner to—shifts in biopolitical governance in the current neoliberalizing world. This argument emerges out of Elizabeth Povinelli's observation that nearly constant small-scale distresses have become a signature of the second-class human condition under neoliberalism (2011).

The mode of being of FEMA trailer residents is what Povinelli would classify as endurance. In her words, “endurance encloses itself around the durative—the temporality of continuance, a denotation of continuous action without any reference to its beginning or end” (2011: 32). This temporal orientation of remaining clutched to the ongoing present is fostered by the drawn-out and mundane hardships that Povinelli chronicles in both Aboriginal Australia and marginal America. The rhythms of life and uneventful death that she documents in *Economies of Abandonment* are situated within the transnational space-time of neoliberalism, or more specifically late liberalism, and mirror the experiences of chemically exposed FEMA trailer residents. Both and are, on average, “cruddy, corrosive, and uneventful. An agentless slow death characterizes their mode of lethality. Quiet deaths. Slow Deaths. Rotting worlds. The everyday drifts towards death” (Povinelli 2011: 145). The FEMA trailers' invisible formaldehyde vapors and inhabitants' subsequent constellations of ongoing, often-subclinical symptoms make for slow, quiet, and uneventful morbidity that rarely manifests in overt mortality. Such circumstances became even more (relatively) uneventful as they began in the aftermath of one of the most spectacular and publicized

catastrophes in US history. Disparate complaints of domestic illness paled in comparison to the visual grandeur of a decimated major American city.

The FEMA trailers, part of a federal intervention aimed at protecting the health and wellbeing of the displaced, provoked inexplicable feelings of exhaustion, worries of child safety, and a slight acceleration towards death. This paradox highlights the contemporary form of what Michel Foucault dubbed “biopower.” Classically, European heads of state ruled through the imminent threat of death. The sovereign had the right to either “have people put to death or let them live” (Foucault 2003: 240). Beginning in the late 18<sup>th</sup> century, this technique of power—that of the poised sword—began to be increasingly complemented by an inverse means of control, wherein maximizing the health and wellbeing of subjects is part and parcel of maximizing state power and the utility of the governed. Such regimes of governance that revolve around “the power to ‘make’ live and ‘let’ die” (ibid: 241) are those that Foucault would highlight as biopolitical.

Povinelli’s work demonstrates that a diluted form of *make die* is infused into neoliberal regimes’ adoption of the biopolitical imperative *make live or let die* (Povinelli 2011: 22). This patterned enervation of life is a key facet of economies of abandonment. Such economies silently cultivate morbidity within state projects championing the cultivation of health and order—projects typified by the FEMA trailers. At the confluence of chronic disaster syndrome and wide-reaching economies of abandonment, sick FEMA trailer residents came to have an embodied understanding of the nascent corrosive properties of contemporary biopolitics. This, often tacit, awareness to systemic abjection forestalled attempts at biocitizenship. While most overt in this chapter, Povinelli’s analytics of eventfulness, her re-calibration of biopolitics, and her appreciation of the “the complex temporal and spatial nature of recognition” (ibid: 76) is of critical importance in holding the

disparate filaments of this thesis together.

Although this chapter focuses on the original deployment of the FEMA trailers after the hurricanes of 2005, those inhabiting *resold* FEMA trailers across the country experienced similar feelings of being stranded and left in the lurch by their government. As one former FEMA trailer resident lamented in a message to me, “as usual we are left to fin for our self’s. And let them slowly kill us.”<sup>57</sup> With no catastrophe, spatial proximity, or media attention to ground the new FEMA trailer inhabitants, their sense of desperation is profound. Lawyers do not return their phone calls. State Attorneys General do not return their letters. Their online petitions garner few signatures beyond friends, family, and activists. The fourth chapter will bring these sentiments into relief, signaling the wider inadmissibility of biological citizenship for the ongoing and gradual disasters that are an ingrained feature of the contemporary moment.

This chapter does not refute that citizenship was at stake in the FEMA trailers, but rather posits that citizenship’s principal locus lay beyond damaged bodies and related claims for redress. As outlined in the first chapter and as will again be touched upon in the fifth chapter, the primary seat of citizenship struggles resides in the spatial dimensions of citizenship, rather than the biological. Before digging into two case studies that de-emphasize the importance of redress claims, I introduce the litigation on its own terms.

## **The Toxicity of Tort**

When the FEMA trailers first made the national news in 2006 I didn’t think much of them, other than such a happening was profoundly disheartening. The horrors of the flooding

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<sup>57</sup> Email from Kathy (see Chapter 4), a former FEMA mobile home resident in her mid-50s in rural Indiana, to the author on 22 January, 2013.

of New Orleans were, alone, too much for me to process. The previous summer I had been helping friends from Texas drive their cars up to New York for our sophomore year of college. We only stopped in New Orleans for one night but as luck would have it, it was the day before Katrina hit. As we left, headed east on I-10, my last glimpse of the city was down St Bernard Ave, a view foregrounded by the triumphant Circle Foods store—a cornerstone of the surrounding historically Creole neighborhood. Days later I would find that same vista printed across the cover of the *New York Times*, with a bloated body drifting—face down—along the inundated avenue. Oblivious to the hurricane as we churned through mixed CDs, we drove through a peripheral tempest. Exiting the city in torrential rain on 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 a storm surge on its way to flooding the city. We, luckily, escaped unscathed.

I didn't return to the city until the spring of 2009. One of the friends I was visiting had landed an entry-level administrative position at a law firm. Her days happened to be largely focused on the FEMA trailer product liability case. As she walked me through the details of the suit, intrigue gave way to fascination. After a quick preliminary research trip in August, I was back in New Orleans in December for my master's thesis fieldwork. I was based out of the same Central Business District law office as my friend.<sup>58</sup>

The law office appeared to be a prime starting point for my research, as it was the meeting ground of lawyers, plaintiffs, and scientist expert witnesses. It was, additionally, the site in which manifold claims of injustice were translated in the binding idioms of law (*cf* Latour 2010). I saw the lawsuit as its own, meticulously documented, ethnography. The transcripts and binders of evidence were robust field notes ready for an analyst of the process

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<sup>58</sup> She quit her law clerk position between my preliminary research trip and my first round of fieldwork.

itself to dig past the black and white nature of the court's forensic reading. This section outlines the shortcomings of the litigation in broad strokes. The macro-contours of legal process will be in-filled with ethnographic details in the following two sections.

Plaintiffs sought redress for injuries they claim to have resulted from formaldehyde exposures that occurred in the FEMA trailers. They in turn sued the federal government that supplied the trailers and also trailer manufacturers. The third, category of defendants was comprised of large corporations that installed the trailers in a way, the plaintiffs alleged, that increased formaldehyde off-gassing.<sup>59</sup> By way of the lawsuit, plaintiffs were asserting their right to have *not* been injured by living in an emergency housing unit.

I saw those bringing suit as attempting to triangulate access to this right of citizenship by way of a constellation of manufacturers, trans-national corporations, and the federal government. The accountability relationship between trailer inhabitants and the government is that of citizen-state but supercharged with consumer relationships to trailer manufactures and subcontractors. For those who lived in the FEMA trailers, to be a citizen was also to be a corporate product and service consumer, a very neoliberal version of biological citizenship.

I conjectured that the lawsuit was the major battle to be fought. I conjectured that the hopes and livelihoods of plaintiffs were invested in the careful orchestration of science, sentiment, and argumentation needed for a successful lawsuit. I conjectured that personal engagement with the litigation would amount to a collective process of renegotiating citizenship. It certainly appeared that way for the first few days in the bustling fourth floor office in which I worked. But key suppositions of my initial hunch very quickly began to

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<sup>59</sup> This, so the argument goes, was achieved by the torsion of the frame of the trailer as each corner was jacked up individually before being placed on cinder blocks—transforming this temporary housing unit into a more permanent dwelling. The twisting of the frame then broke seals and moisture barriers, allowing for water entry which exacerbated formaldehyde off-gassing. The corporations that were contracted to do this work were summarized by one attorney as “haliburton-esque” in terms of size and close ties to the federal government.

break loose, both in terms of legal proceedings and ethnographic findings.

At the office my responsibilities were somewhere between that of a law clerk, an intern, and a consultant. I assisted with preparing deposition materials and evidence lists. I researched defendants' expert witnesses and met with plaintiff expert witnesses. I worked under a high-minded attorney, Rikki Elver, who in turn worked for a less perceptibly high-minded attorney, Steve Nibbs, who ran the firm. Nibbs was less interested in my research than making sure I was not a mole for the formaldehyde industry. Nibbs was the sort of lawyer who has a rhyming slogan and advertises on the back of the phone book or on billboards along accident prone stretches of the highway—the passive modes of ambulance chasing ethically admitted by the bar. As many misgivings as this breed of lawyer may conjure, they are integral to the process of mass tort as financiers. Nibbs, had, I was told, upwards of two million dollars invested in the case. The cost of litigation adds up: years of hired expert witnesses, depositions, travel, attorney's salary, paralegal's salary, constant FedExes, law clerks' salaries, office space, and an almost insatiable demand for basic office supplies. Unlike individual cases, in which the plaintiff usually bears the burden of funding litigation, enrollment into mass tort is without upfront cost. As a result the attorney's final cut is likely higher and mass torts are potentially high-yielding investments. With the investment his own, Nibbs was incentivized to work the minimum number of hours needed to win a hefty settlement.<sup>60</sup> Nibbs was one of a dozen law firms on the plaintiff's steering committee that represented upwards of 90,000 individuals in total.<sup>61</sup>

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<sup>60</sup> See Bernheim & Meet 2008, for an in-depth case study on a similar incentive structure for real estate brokers.

<sup>61</sup>To show the other side of the coin, following is an email from an anonymous attorney defending their role after a paltry settlement was reached in September 2012. This message was forwarded by Becky Gillette to her 'formaldehyde list' on October 1<sup>st</sup>, 2012, "I and the other lawyers in this case spent thousands of hours and millions of dollars in this case. I don't anticipate that I will make a cent and my firm will probably not be reimbursed for all of its expenses. [...The] vast majority of people simply felt like that it was bad that people got sick, but that it just didn't rise to "a federal case" since people received these for free. Many said these trailers were pieces of junk but not necessarily "unreasonable dangerous." Also, most plaintiffs smoked or had

Working long hours, Rikki Elver was nearly always exhausted. He was equally optimistic. His rhetoric was rife with allusions to grand concepts of justice. Despite Rikki's passionate drive, it became increasingly evident that the firm as a whole was involved with FEMA trailer exposures to make money and not necessarily to carry out the broadly conceived notions of 'justice' that Rikki saw himself as purveying—two motivations that are not necessarily mutually exclusive. Intimations of such snowballed throughout my stay at the firm. On one of my first days, someone working on another case, on another floor, called out the sound of a cash register opening, "Chaaaa-ching," through the office intercom after reaching a lucrative settlement. Before quitting, a law clerk informed me that she was asked to go through the plaintiff listings and roll back the dates of initial consultation so that more attorney hours could be logged. By the end of my tenure at the firm it was patent that the priority of the plaintiffs' prerogatives were diluted as they were positioned less as 'clients' to be served than intermediaries between lawyers and their cut of a multimillion-dollar settlement.

The impersonal and lumbering process of mass tort litigation discouraged plaintiffs. As the suit failed to meet class action certification because of the diversity of manufacturers involved, and therefore a theoretical diversity in the mechanisms of injury, the litigation proceeded with a series of "bellwether" trials. Bellwether trials, an increasingly common phenomenon in US tort law, are cases taken to court as (ostensibly) statistically representative of a sub-population of plaintiffs (*cf* Jasanoff 2002).

In the lead up to one of the early bellwether trials, the defending trailer manufacturer opted to settle as they were well on their way to bankruptcy. The bellwether plaintiff, who had already spent countless hours spilling the private details of her life in depositions and the

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other health problems unrelated to their time in the trailer."

discovery process, was not entitled to increased compensation due to the defendant's bankruptcy. Another law clerk described to me the sheer desolation of this bellwether plaintiff. The clerk recounted steadying the woman as she staggered to her car, tears drying on her cheeks. "The check for a couple thousand dollars, if that, is going to be a slap to the face," the clerk said, her gaze ruefully skimming the floor.

In addition to the opportunistic involvement of the firm and the structural distress brought about by the process of mass tort itself, plaintiffs were increasingly disheartened by the legal complications encountered by their lawyers. The government, which is largely seen as the primary perpetrator by those that I interviewed, was cut loose from liability. First Louisiana and then Mississippi and Alabama courts dismissed the federal government as a viable defendant due to a lack of "subject matter jurisdiction." More precisely, the courts ruled that FEMA could not be held accountable for any damages resulting from the provision housing units due to sovereign immunity conferred to the state during an emergency. The federal tort claims act provides that "the United States shall be liable in the same manner and to the same extent as a private individual under like circumstances" (28 U.S.C ss 2674). FEMA is then shielded from analogous private liability through each state's emergency management laws, under which those supplying free housing to the displaced are protected as good Samaritans. Legally, the courts ruled, FEMA had no more responsibility to provide housing than well-meaning bystanders with a spare room. Thus, FEMA had no liability. A predetermined state of exception accompanies emergency, flattening normal hierarchies of governmental duty and liability (*cf* Fassin & Pandolfi 2010).

While back in the UK for six months to write my master's thesis, the building next to the law firm, which was undergoing renovation, caught fire and charred the office. Employees quietly suspected that Nibbs himself was behind the blaze to collect insurance and

potentially protect against cooked books. They told me that the fire started on the wall closest to Nibbs' personal office and his filing cabinet was the most thoroughly damaged equipment.

Desperate to leave the firm, after clashes with Nibbs, the loss of a bellwether trial, and his relocation to a diminutive attic cubicle, Rikki left the firm for a job with the BP oil spill litigation. His parting words to me, a paraphrasing of the head of the plaintiff steering committee, were that the FEMA trailer suit would remain nothing more than "enduring badness." He tried to get me to follow him and re-calibrate my work to focus on human oil and dispersant exposure. I almost did.

As the enthusiasm and righteous language ebbed and defense-friendly rulings rolled in, it became clear that if this was indeed an attempt at biological citizenship, it was a failing one. Failure was indeed still of interest to me and didn't disqualify my hypothesis that the lawsuit was the means of a specifically American mode of bio-citizenship, framed by capitalistic accountability structures that redistributed the onus of providing the entitlements of citizenship, at least in part, to corporate entities. This was a system predicated on constrained mechanisms of accountability. The failure of attempts at bio-citizenship, in this system, was the predicted outcome. But what I didn't anticipate and certainly could not see from the insularity of the office was that failure of the lawsuit was also the anticipated outcome, to some extent, of most FEMA trailer inhabitants with whom I later spoke.

By the time I started speaking with them in 2010, the hopes, dreams of accountability, or even financial horizons of FEMA trailer residents were not entrusted to the FEMA trailer formaldehyde product liability litigation. All but a small handful had already moved out of their trailer. Some were aware of the futility of mass tort. Some were even more aware of the Gulf Coast's long tradition of impeding chemical exposure litigation at the beck of industry. Many, largely mothers, rejected the civil suit's rhetorical equivalence of money and bodily

damage. They did not buy into litigation's promise that money will compensate for wounding, that recompense bore the fantastical capacity to return the injured to a prior state of life. Many individuals with chronic health issues opted not to sue. Many more with temporary ailments chose not to seek redress. More still, likely didn't file suit for fear of FEMA rescinding their trailer, a widespread anxiety amongst those whose FEMA trailers was their only mooring.

The following sections document two cases representative of those suffering from ongoing illnesses and enrolled in the toxic tort despite ambivalence expressed towards legal proceedings. My analysis focuses on those with sustained and significant health issues, which they attribute to time spent in a FEMA trailer. This analytical attention is both because these informants potentially had the most at stake in the litigation and because chronic disaster syndrome had worn down the region's attention to all but the most pressing vestiges of the disaster—only considerable illnesses were distinct enough to be chronicled in depth.

### **The lost epidemic**

Truth *happens* to an idea. It *becomes* true, is *made* true by events.  
—William James (2008 [1909]: 5)

I rattled my knuckle across the ajar door of room number 342 with my left hand as I pushed the door open with my right. A stern-faced female doctor was running through some of the possible arrangements for chemo and radiation therapy following an upcoming CT scan of her patient's latest tumor. After a slight pause to acknowledge my presence, she turned and began discussing a hole in his most recent skin graft.

He sat delicately atop a mess of blankets and sheets. His beard hid his hallowed-

cheeks, and, from his face, you could make out that he was probably in his late forties or early fifties. He had a flinty-eyed ferocity and a direct and heavy gaze. His legs, and to a lesser extent his arms, looked cadaverous. Muscle, vessel, and bone were visibly distinct to the point that an anatomy class could be taught on his leg without need for incision. His thin body hardly made an impression upon the mattress.

Every so often, when he spoke, you could hear the effort it took to push words up over his tongue. Vowel sounds that required a dropped jaw or the ends of some words would get indistinctly enunciated—an energy efficient adaptation to atrophy and exhaustion that made him sound somewhat drunk.

“Basically, I just want what is most likely to work,” he told the doctor. A year after Mac moved out of his FEMA trailer, he began developing a succession of rapidly growing cancerous tumors. He was in the hospital that day to see if his seventh tumor, a lemon sized protuberance in his left armpit, had metastasized into his lymphatic system. It had.

As the doctor departed, Daniella, who hosts Mac at her home while his house is in the final stages of being repaired, ushered me further into the room. A bob of grey hair matched her trim tweed jacket. Her gestures and words were warm but measured. Daniella and I had been exchanging emails and phone calls for months, repeatedly rescheduling our meeting due to unexpected declines in Mac’s health. After our introductions, and without hesitation, Mac launched into telling his story.

When the storm hit, Mac was living in the Mid-City neighborhood of New Orleans, near Bayou St. John, and had already been on dialysis for five years. In the late 90s his kidneys had swollen up to over six pounds each due to polycystic kidney disease, a relatively common inherited disorder. Both his kidneys were removed and he was thereafter required to make semiweekly trips to the dialysis clinic to clean his blood. All the while he was still

running his wood flooring business. “Up until the day of before Katrina. I was running a business with 30 people” Mac relayed, with palpable nostalgia, “I was running a commando team and knocking out very professional jobs. I’ve always been in almost Olympic athlete condition. I was in really good shape and that’s why I lived through all this stuff.”<sup>62</sup>

After an initial evacuation to Mississippi, Mac bought an old airstream trailer and parked it on a friend’s property in northwestern Arkansas. Mac was in survival mode, “I was on my own...up there.... all I did up there was keep my trucks going so I could get my dialysis and make it to my next meal. I just tried to stay alive.” After a nine-month stay in Arkansas he heard word that a FEMA trailer had been set up in his back yard and another had been towed into his front yard for a friend who had no real estate of his own. Mac was eager to get back home and get back to his doctors as he felt that his dialysis wasn’t being handled properly in Arkansas.

“So we get in the FEMA trailer, its been closed up since we got it, for months in the sun. We opened it up and it smelled terrible. But we figured, ya know, we would just air it out.” Mac recounted with nonchalance, “We put fans in there and left all the windows open for a couple days and after that, it didn’t smell too bad.” He later tested the air in the trailer and found formaldehyde levels of 0.372 ppm, well over three times the maximum indoor air concentration as recommended by the EPA. As Mac moved into his FEMA trailer he was recuperating from a dialysis-related surgery and attempting to switch to a form of dialysis (peritoneal dialysis, or PD) that he could administer himself from home:

So here I am trying to recuperate from surgery and I am just starting on PD, and so I do that for how long was it? Maybe 6-8 months... I’m not recuperating and things are not feeling well and stuff and then I started getting the weirdest experience: my nose is completely clear—although it would bleed

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<sup>62</sup> This and the following statements by Mac and Daniella occurred at Oschner Baptist Memorial Hospital on March 3<sup>rd</sup> 2012.

sometimes—my sinus is completely clear, my throat was completely clear. I can deep breathe with no problem, no congestion. Nothing. But if I lift my arm up and down I'd be out of breath and have to rest for a half an hour just to recuperate. The only way I can described it... what it felt like to me is that the air would go in but the body couldn't use it or it wasn't getting to the cells or sumptin' was, like, interfering with the uptake of oxygen.

*The weirdest experience* Mac found his own body more and more out of sync with the larger world around him. The most unremarkable of motions became life-draining affairs. The problem was nearly inexplicable and only imaginable to him on a molecular level, leaving the rest of the respiratory tract uncannily unscathed.

On one occasion, as he was descending into sheer exhaustion, Mac came home to find Dave, Mac's friend who lived in the trailer in his front yard, sitting in his car in the driveway staring off into space. Mac tried to get his attention, "Dave, what's happening?" he asked through the closed driver's side window. Garnering no response, Mac knocked on the window. He could feel something wasn't right. Without turning his head, Dave loosely held up a single finger to the window as a response then, gradually, dropped the finger down onto the automatic window switch. As the window rolled down, he turned and whispered, "I can't breathe."

Dave didn't want to go to the hospital because he lost his insurance card in the storm and would need it to procure treatment. The few hospitals that had re-opened were overcrowded as well, and Dave did not consider his physical distress to be severe enough to warrant such a hassle. Despite Dave's hesitancy, Mac was going to take him to the hospital. Mac perceived unspoken urgency in Dave's behavior and ran down the block to where he had parked his car. As Mac pulled up he saw Dave, who had exited his vehicle, draped over his car like he was being frisked. Dave then, half-lurching, half-collapsing, fell to the ground. He

died of congestive failure, there, in the space between the driveway and the trailer. A nurse strode in, severing the moment, “They are going to do the CTs today and then I’ll send a hard copy to Dr. Armstrong.” After the nurse left a few minutes later, Mac noshed gingerly on some ice—a way dialysis patients quench their thirst without taking in too much liquid volume.

Mac holds the FEMA trailer responsible for Dave’s death. Months later Mac suffered his own congestive heart failure while nested among his dialysis equipment in his FEMA trailer.<sup>63</sup> Before either of their hearts stopped, Mac had enrolled in a formaldehyde lawsuit when the only symptoms that he associated with the trailer were his draining chronic fatigue and shortness of breath.

With an indifferent shrug, Mac recounted that he had no interest in seeking monetary redress or, on a more abstract level, putting a negligent federal response or trailer manufacturers in check. His aims were both farther up and farther down stream, “As far as I’m concerned, when I first heard about the FEMA lawsuit. I was like ‘aww, I don’t want to be bothered with all that,’ but then I thought maybe I should just do that even if it’s just documenting everything for mankind, or whatever.” His sights were on formaldehyde itself as the elemental building block of his affliction and a potential threat to other or future populations. The utility he recognized in the lawsuit was a function *secondary* to the legal process. Mac saw litigation as a means of staking out his own small, quantified spot in the historical and scientific record. His desire was to be rendered as a statistic, for his body to become part of larger “informational bodies” (Caduff 2012).

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<sup>63</sup> Four years after Katrina, myocardial infarctions in New Orleans were three times more prevalent than before the storm (Hameed et al 2011, Moscona et al. 2012). The same studies also noted statistically significant increases in unemployment, lack of medical insurance, medical ‘non-compliance,’ substance abuse, psychiatric co-morbidities, history of coronary artery disease and percutaneous coronary interventions. There were no significant differences between the demographics of the two compared populations apart from an increase in those labeled as single/divorced. While living in a FEMA trailer was not a noted variable in these studies, they are likely another stressor, yet just one among many.

While this *is* a particularly hopeful instance of biopolitical decision-making, as Mac seeks to contribute his own malady to the stewardship of populations, it is not an episode of biological citizenship. Filing suit was not a means of survival and he sought no entitlements of citizenship via his damaged biology. “I wanted to document everything just so that the public arena had the facts, so to speak. Ya know, the statistical facts of what had happened,” he told me. Mac is more of a biological humanist than a biological citizen as the populations of the ‘public arena’ he intended to protect with future chemical understanding is not bound by the nation-state. He continued:

My understanding was that this is the first larger scale exposure of mankind, anywhere, to formaldehyde. And that they [scientists/doctors] were in denial mode, that formaldehyde had anything to do with it [negative health outcomes in the trailers]. So I determined that if I don’t say anything it will just be...if a million people do the same thing as me and don’t say anything then there is a whole epidemic and a whole event that's been lost and so I determined I at least wanted to get on record with all this stuff so that they had the right statistics. Where, in the future they analyze ‘em, there would be a whole thing... more accurate numbers...

*A whole event that’s been lost* Mac recognized himself as situated between a unique place in the history of human toxic exposure and common place within a multitude of similar FEMA trailer formaldehyde exposures. His body was part of the distributed documentation of an anomalous exposure that, taken collectively, posed the potential to render the human health effects of ‘low-level’ chronic formaldehyde exposure in unprecedented clarity. The lawsuit was a means of coalescing and recording somatic harm for public good.

Mac’s recourse to law was not in the pursuit of recompense or his assertion of the right *not* to have been injured by his emergency housing unit as much as it was a small contribution towards the scientific understanding of toxics. For Mac litigation, which is often thought to simply be the means to a specific end (money), was the means to an unspecified

future benefit, and not his own. His filing of suit was a small action against what Michelle Murphy (2006), refers to as dominant ‘regimes of imperceptibility,’ which systematically disqualify causal ties between chemical exposures and negative human health outcomes.<sup>64</sup>

Mac recognized that to keep his nearly inexplicable and durative symptoms from becoming “lost” and falling out of the scientific record, his FEMA trailer formaldehyde exposure must reach a critical threshold of eventfulness. Mac did not see the massive multi-district litigation as an event in itself but rather a means of documentation that could convey the eventfulness of his exposure to the correct, global scientific, register. A settlement would not travel with formaldehyde, whereas “more accurate numbers” could echo throughout future exposures—beyond the specificity of the court case. Without being scientifically chronicled, his quiet suffering, and thousands like it, would remain a mere *quasi-event* (Povinelli 2011) that bears both a feeble ethical charge and a lack of statistical robustness. Imaginaries of eventfulness under neoliberal regimes, Povinelli asserts, relegate the violence of the everyday to a status near non-existence.

Following Foucault, Povinelli understands neoliberalism not as a “thing but a pragmatic concept—a tool” (ibid: 19). Yet, as will be discussed in a following section, the instrumentality of neoliberalism in her connection between economic regimes and horizons of eventfulness may be somewhat overestimated. Put differently, imaginings of eventfulness in Soviet and Post-Soviet situations do not appear to differ greatly from situations in which neoliberalism is leveraged. While the causality of thresholds of eventfulness may exceed Povinelli’s argument, her assertion that only the sublime specters of terrorism and epidemics “oppose and stand outside of the everyday uneventful forms of misery and dying” (Povinelli 2011: 146) holds strong. As cursory evidence, more than a dozen scientific articles on

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<sup>64</sup> See Chapter 2 for an extensive review on how low-level chronic exposures become scientifically un-known.

investigations into 9/11 clean-up worker's occupational exposures and ensuing respiratory issues have been published (e.g. Aldrich et al. 2010; Banauch et al. 2006; Skloot et al. 2009; Webber et al. 2009), while only one NGO white paper has attempted to quantify the health issues of FEMA trailer inhabitants (Children's Health Fund 2008).<sup>65</sup> Clean-up workers were seen as secondary victims of terrorism, the ultimate form of eventfulness, as they performed the highly patriotic act of restoring New York's tarnished landscape (Navarro 2010b). Those facing occupational illnesses after 9/11 had at their backs "the enabling power of catastrophes" (Beck 1992: 78). Whereas chronic low-level exposures during FEMA trailer residency failed to sever the tether of commonplace forms of immiseration.

In the spring of 2012, I spoke with a toxicologist contracted to work on the FEMA formaldehyde litigation. One of my first questions was if joining the lawsuit could actually impact the toxicology of domestic formaldehyde exposure, as Mac and numerous others hoped. Francesca Daniels PhD DABT, a fast-talking and forceful New Orleans native, clenched her jaw and leaned over her desk. The diamond encrusted cross that hung from her necklace swung forward, "Now that's a great question":

I suggested that we do a real data gathering survey, which was mine. So and I prepared health surveys...its an environmental history. That would have made a difference, but they [the plaintiffs' lawyers] did not want to do that.... I don't know. [...] They didn't choose to do it. Lets put it that way. [...] So there is no good database, so someone who is coming in saying I wanted to contribute my [body], that isn't there for this particular group. Because they did not do that [let her collect the data]. [...] So that's a regret, I think. [...] But it [her survey] was never used but if it would have been, I would be able to publish this, but it wasn't.... so it won't get published [...] it was just too many power plays amongst the attorneys to get

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<sup>65</sup> Understandably, more time has passed since 9/11 than Katrina, allowing for the development of lines of research. But to my knowledge only one study is currently underway relating to trailer formaldehyde exposure. I sat in on one planning and one community meeting for this study and both technical advisors and community members have voiced significant concerns about the inconclusively of the method employed by this government funded study.

anybody to see---Hey! This is *the* biggest database we will ever have on this type of trailer.<sup>66</sup>

*there is no good database* Francesca chalks up the lawsuit's failure to scientifically capture the plaintiffs as an exposed population to the myopia of attorneys jockeying for power in the Plaintiff Steering Committee. Such dynamics countermanded Mac's and many others' hope for leaving a statistical legacy by way of litigation.

### **Enduring on the Edge**

When Mac speaks about the lawsuit and his participation therein, he doesn't speak on the level of legal entitlements or rights. Neither does he speak to enfranchisement on community, state, or national levels. Mac conceptualizes both his injury and his responsibility to act on the species level: *mankind*. That is the scale of the process of formaldehyde production, use, and exposure, in which he sees himself caught. When discussing chemical exposure, Mac often moved freely between his own body, Louisiana's chemical industry, and global flows of chemicals and capital.

Mac's conceptualizing of his own exposure and his turn to law was not based on an ignorance of environmental law, far from it. Daniella, who sat with aplomb on the other side of Mac's bed—sporadically interjecting factual corrections—had worked at a local environmental law clinic during their most intense period of litigation with the state's entrenched petrochemical industry. For over a decade she traveled all over Louisiana organizing citizen groups around environmental issues and supplying them with lawyers, which they would otherwise not have been able to afford. Ever curious, Mac would often tag along as Daniella travelled to far-flung and chemically saturated communities across the

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<sup>66</sup> This conversation with Dr. Francesca Daniels occurred on 9 May 2012 in her office.

state. “She was like the woman in the movie *Pelican Brief*,” Mac recounts with a warm grin, scratching his back by pulling his t-shirt to and fro.

The environmental law clinic Daniella worked for was hugely successful throughout the 1990s, too successful even. The clinic, which relied on the free labor of law students under the supervision of a professor, was consistently defeating highly paid teams of corporate attorneys and halting pollution-generating production. The Louisiana Department of Economic Development began surveillance of the clinic. Louisiana Governor Mike Foster publicly vilified the clinic, calling them “vigilante” “yahoos” on television. And in the summer of 1998 the Louisiana Supreme Court came down with a ruling that whittled the capabilities of all student law clinics to that of an inoperable stub (Allen 2003: 102-105). Daniella left the clinic at that point, with palpable disappointment in Louisiana’s legal avenues of environmental justice. Regarding the FEMA trailer litigation, Daniella noted, “we certainly haven’t gotten any indication that there is much hope in the legal arena at this point.”

When I asked Mac if he saw the FEMA trailer incident as related to larger chemical exposure issues of the Gulf south he immediately responded, “well of course... it’s part of the bigger issue because it’s part of the chemical contamination of of... the world.” Daniella elaborated, “Because of my experience, we see the links and how it’s dealt with in the health arena. It’s the same situation...the barrier has not really been broken to legitimize these issues in the legal world.” *It’s the same situation* Mac has come to very literally embody the chemical political economy that Daniella made a career out of challenging.

At first, Mac felt that the degree of his toxic infusion was minor but significant and even more crucial when accounted for in conjunction with the hundreds of thousands of other FEMA trailer residents. Yet, as cancer surfaced, was painfully quelled and then resurfaced,

again and again and again, Mac's altruistic view of the lawsuit-as-archive rhetorically wavered, "my opinion has changed since I had all these tumors and now I have this [gesturing to the tumor in his armpit]. This is ongoing." Slowing his cadence as his story eased into the present, Mac assessed his position:

I'm concerned at this point now the formaldehyde trailer has brought me to the point of almost killing me. Put me on the edge. Though this and everything I'm still not feeling right. And I don't know what it's going to do. I don't know the long-term effects of this shit. This is just what happened from immediately after—a few years. What is going to happen in the future from formaldehyde poisoning? That is why I want to find a detox. I want to get this shit out of me. It ain't out. I can feel it....I'm still contaminated.

*Put me on the edge.* On four separate instances during our conversation Mac discussed his current apprehensions and uncertain future. Each time, his words inflected with distress, he ephemerally appeared to have charged the lawsuit with greater import as the magnitude of his wounding grew larger with time. It would seem that he was more invested in punishment, compensation, or legal justice. Yet, on every occasion when he appeared on the verge of implying a new salience of the toxic tort proceedings, he stopped short. His outlook from the edge had not brought the litigation into a more primary proximity but rather had let it fall away.

The severity and persistence of his injuries had constricted his focus from the future anterior to the immediacy of his own presence. His talk of *mankind* had receded. He was focused on expelling the cause of illness from his own body rather than the statistical apprehension of the collective body of the exposed. His hopes were narrowly focused on the alternative medical practice of 'detoxing,' which he turned to each and every time he contemplated his current situation out loud, "I haven't been able to do it yet, but that is the first thing I want to do. Soon as I can do anything...." The urgency of the feeling that he is

“still contaminated,” that every breath is laden with the uncanny residues of exposure, attenuated his horizons from the near geological time of exposure science progress to an anxious monitoring of the ongoing present. He is stuck in a loop of constant self-appraisal. Does he feel well enough to “do anything”? This traversing of temporalities—from long-term scientific change to a preoccupation with the present—breezed past the lawsuit settlements of the near future, in its constricting view. Litigation was beyond his hope, as he and his forward-looking sentiments were utterly exhausted by both the haunting persistence of chronic ailment and eroded expectations for the law.

### **The Privilege of Biological Citizenship**

Whenever citizenship comes to look like a question of the *body*, a number of processes are being hidden.  
—Lauren Berlant (1997: 36)

There are multiple critical distinctions between post-Katrina federal assistance and the post-Chernobyl welfare apparatus that fueled Petryna’s observation of biological citizenship in Ukraine. As will be developed in this section, the economies of abandonment in the Gulf Coast after hurricane Katrina and larger imaginings of eventfulness fundamentally precluded the pursuit of biological citizenship for exposed FEMA trailer residents.<sup>67</sup> To bring these distinctions into relief I shift my analysis from the spectacularly inflicted harm and state-backed institutions of biological citizenship to the much less conspicuous ways of refuting accountability and exhausting populations. This shift follows Didier Fassin’s critique of social scientists of medicine and health’s over-attentiveness to biology in the strictest sense.

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<sup>67</sup> Within a local frame, the direct spectacular damage from Katrina acted as an alibi for the uneventfulness of the chemical exposures in the FEMA trailers. This indicates the steep shoals of the event as Povinelli cites the aftermath of Katrina as an icon of eventfulness in the contemporary US (Povinelli 2011: 133). As Massumi (2011) notes the ‘half life of disaster’ in the media is approximately two weeks, after which an exponential drop off in ongoing coverage erodes the connections between islands of catastrophe and the archipelagos of quasi-events that multiply in and form a disaster’s true wake.

Fassin writes, “as far as the biological reality of life is concerned, it is not just about cells and genes, it is also about the wearing away of bodies, which is closely linked to inequalities of living conditions” (Fassin 2010: 190).<sup>68</sup> Social scientists of health often take the sanctioned frame of scientific research as representative of “the biological reality of life” at the expense of less bound and eventful processes. The economies that “wear away bodies” constitute the primary nexuses of the state and biological harm in the case at hand. The easily overlooked experiences of enervation form the central figure of this chapter.

At first blush, the legal recourse of tens of thousands of FEMA trailer inhabitants—in light of the claimed formaldehyde-induced illness—could be seen as a project of biological citizenship. Indeed, in her study of American tort law, Sarah Lochlann Jain suggests that citizenship is always at the center of injury tort: “Plaintiffs in cases such as the McDonalds obesity case use law as a way to reassert a citizenship denied through the social and physical injuries of obesity” (Jain 2006: 54). Even if seeking redress for harm not inflicted by the state, filing suit is both flexing your right to *not* have been injured and exercising your responsibility as a consumer-citizen to keep manufacturers of injury-inducing products in check. In the US, Jain asserts, “biological citizenship is uniquely entwined with consumer citizenship” (ibid).

Further, historian of science Michelle Murphy asserts that the effort taken to interdict the chemical saturation of Louisiana, among other struggles, can be rightly categorized as “biocitizenship projects that took chemical exposure as an entry into renegotiating the terms of citizenship” (Murphy 2008: 699). Daniella, introduced above, worked for Louisiana’s leading environmental law clinic in the trenches of the very struggled over petrochemical contamination referenced by Murphy. Standing over Mac as he lay emaciated in his hospital

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<sup>68</sup> Fassin here reformulates an argument posited by Rudolf Virchow long ago (Virchow 1958).

bed, she asserted that Louisiana's industrial pollution and FEMA trailer formaldehyde exposure are "the same situation." Logically speaking, if the struggles of those along Louisiana's chemical corridor are at least *attempts* at biological citizenship, as stated by Murphy, then biological citizenship should be a fruitful explanatory frame for the FEMA trailer product liability litigation.

Yet both of the above cited angles of biological citizenship's pertinence—inherence in injury tort and inherence in the contestation of chemical exposures—are theoretical schematics. The application of the concept is based on assumptions of both the cross-cultural and cross-economic applicability of Petryna's post-Soviet observations. Such assertions also assume uneventful injuries stemming from chronic harm garner accountability and individual investment in said accountability in a way that is roughly commensurate with epoch-making events like Chernobyl.

Adding further pause to the invocation of the term, sociologist Alondra Nelson has noted the over-extension of biological citizenship, and asserts, "Among scholars of patient advocacy and health social movements the phrase [biological citizenship] is often used fallaciously, as a way to mark the emergence and politicization of new biosocial communities" (Nelson 2011: 184, also *cf* Plows & Boddington 2006). More often than not, the deployment of biological citizenship reveals more about social scientific tendencies to homogenize contact between the state and biomedicine than the actual field of study. To understand the manifold and telling departures between the case at hand and Petryna's conception of biological citizenship—the most detailed and persuasive account of the process—we first need to take a closer look at the rather unique circumstances that gave rise to the term. We can better understand the phenomenon of biological citizenship as a "temporally unfolding situated practice" (Rabinow 2003: 17), in which the norms of a

situation are determinative.

In her acclaimed 2002 ethnography, entitled *Life Exposed: Biological Citizens After Chernobyl*, Adriana Petryna explicates the politics of radiation science uncertainty and citizens' pursuit for governmental redress following the 1986 nuclear reactor meltdown. The collapse of the walls of Chernobyl's reactor number four is widely recognized as the beginning of the domino-like collapse of the Soviet Union (*cf* Gorbachev 2006). The meltdown would ultimately precipitate—or at least hasten—the toppling of the Berlin wall, striping back the Iron Curtain, and the independence of Ukraine. It is not a stretch to label Chernobyl an epochal occurrence.

The nuclear event itself was both the beginning of a change in the substance of Ukrainian rule and of its citizens' biology. As Petryna observes, “People were converting themselves from Soviet citizens into biological citizens in their driving efforts to maintain a tie with the state and to avoid abandonment” (Petryna 2002: 85). Upwards of seven percent of the Ukrainian populous strove for government compensation in the biosocial fallout of this atomic disaster. The claims process was part of the mutual embrace of a fledgling democracy reaching out to exposed citizens and of nationals' maintained grip on governmental welfare.

Many sufferers of radiation sickness likened the murk of atomic science to the long history of opaque Soviet bureaucracy and hidden scientific inaccuracy that led, and imperiled the response, to the accidental mass irradiation of 1986 (Petryna 2002: 118). Establishing the legitimacy of post-Soviet Ukraine hinged upon a rhetorical movement towards democracy writ large. As part of the construction of a new “transparent” polity, Ukrainian legislators acknowledged the uncertainties of atomic exposure by lowering the exposure threshold for entrance into programs of social protection from its Soviet level of 35 rem to 7 rem.<sup>69</sup> Petryna

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<sup>69</sup> This new threshold is “comparable to what an average American would be exposed to in his or her lifetime”

notes that many Ukrainians “became masters of the reality of what science did not know about them” (ibid: 28) and that uncertainty, contingency, and probability were incorporated into the practice of medicine and became “valued in the diagnostic process” (ibid: 163). These are a handful among many other aspects of the, perhaps counterintuitive, expansion of the Soviet social welfare system in the face of a transition to an open-market economy.

Some twenty years later, the devastation wrought by the failure of another wall, US Army Corps of Engineers’ New Orleans flood protection system, also beckoned forth economic restructuring.<sup>70</sup> The economic reforms of post-Katrina New Orleans advanced a doctrine both loosely and specifically known as neoliberalism. The final public policy recommendation—or even dying wish—of a 93-year-old Milton Friedman, a founder and champion of neoliberal economic theory, emphatically called for the privatization of New Orleans’ public education system (Friedman 2005).

As Naomi Klein documents, this proposal was quickly met by tens of millions of dollars from the Bush administration that largely privatized the New Orleans school system and began a surge of local neoliberal reforms (Klein 2007: 4-7).<sup>71</sup> The federal government issued over 700,000 individual assistance grants to displaced Gulf Coast residents and

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(Petryna 2002: 23).

<sup>70</sup> The scale of destruction unites these two mega-disasters as engineering professor Raymond B. Seed wrote in an open letter to the President of the American Society of Civil Engineers, October 30<sup>th</sup>, 2007, “The failure of the New Orleans regional flood protection systems was one of the two most costly failures of engineered systems in history (rivaled only by the Chernobyl reactor meltdown).”

<sup>71</sup> During the researching of this dissertation I witnessed the pitfalls of educational privatization first hand as I taught free college credit bearing courses in a range of both public and charter high schools across New Orleans. Students in charter schools—the darling of neoliberal reformers as they are deregulated, routinely emphasize military-like discipline, and are entrepreneurial—often achieve higher test scores than their public school counterparts. Skeptics often decry Charter schools’ lack of structures for transparency, equity and their discrimination against special needs students, yet in my work I was confronted with another qualitative shortcoming. In the fall of 2010 I taught the same course at two different high schools in the same neighborhood. One school was charter and touted as one of the best in the city, the other public and known for its fifty percent graduation rates. Again and again I was made aware that the charter focus on and success in standardized test taking had come at the cost of the conceptual backing of language. For example, my all black class in the charter school could not tell me the meaning of the word “emancipation” but they could tell me the year of Abraham Lincoln’s Emancipation Proclamation. My public school students, while less performative of their attentiveness in class, consistently displayed advanced intellectual curiosity and conceptual ability.

allocated billions of dollars to housing assistance. Yet, instead of stimulating the creation of a welfare apparatus to attend to the ongoing aftermath of disaster like in the Ukraine, pre-Katrina welfare programs were opportunistically shuttered after the storm. Soon after the waters that inundated the city were pumped out, it became apparent that public hospitals would remain closed and even undamaged public housing would be dismantled or privatized. Conservative ideologues read the storm surge's devastation as hygienic—clearing away governmental obligations for up-keeping citizen welfare. These views were epitomized by a widely circulated gaffe made by Louisiana congressman, Richard Baker, "We finally cleaned up public housing in New Orleans. We couldn't do it, but God did" (Babington 2005).

While the federal emergency response floundered into existence, neoliberal think tanks rapidly advanced a new urban policy for New Orleans that promoted:

enlarging the role for private enterprise through market-led development, governmental out-sourcing, and city governance; selective institutional roll-backs focused on the social state; redoubled crime control, making the city safe for tourists and gentrifiers; and an interventionist program of "moral reconstruction" aimed at those stranded in the storm's wake. (Peck 2006: 692-693)

Summarizing the post-Katrina policy shift, geographer Jamie Peck asserts, "the new New Orleans will stand as concrete testimony to the reach and potency of neoliberal urban-policy" (Peck 2006: 684).

The FEMA trailer formaldehyde controversy emerged into this already chaotic scene as a relatively inconspicuous hiccup in the aftermath of disaster. Early in the recovery, an informant in Mississippi was desperately trying to get his FEMA trailer replaced after his family and pet began falling ill and a self-test revealed a vastly elevated indoor formaldehyde level. Attempting to get help by exercising his social network, he asked a friend in Representative Gene Taylor's office to contact FEMA on his behalf. A day or two later his

friend called him back and relayed his conversation, “I had a chance to talk to FEMA, FEMA said they are not going to do anything. They are not concerned because they have sovereign immunity and they are not worried about what is going to happen.”<sup>72</sup> According to this informant, even before the national story broke, the possibilities of litigation were already researched and did not necessitate intervening in the ongoing chemical exposure of over 300,000 US citizens. These domestic exposures amounted to a situation that heralded little to no response for upwards of a year.

In deposition rooms in New Orleans, I would later watch FEMA’s and FEMA trailer manufacturers’ lawyers exchanging notes as their expert witnesses zeroed-in on the ambiguities of low-dose chemical exposures (See Chapter 2). In the centrifugal space of the courthouse, the vast departures between the concerns of the state and their legal opponents—FEMA trailer inhabitants—were readily apparent. Such a scene of opposing prerogatives is a far cry from the largely sustained, albeit fraught, embrace of Ukraine’s social welfare system.

The interests of the wounded and the state building of a nascent democracy overlapped in post-Soviet Ukraine. The desires of both government and exposed citizenry worked together to activate the biopolitical state. They widened the remit of state intervention beyond the parsimonious triage of emergency (*let die*) to a more open-armed welfare apparatus (*make live*). Expanding national practices of science to include complexity and ambiguity strategically paralleled governmental claims on transparency. In agreement with the national rhetoric, Petryna reads the openness of radiological conclusions as democratizing. She observed that the strategic utility of scientific unknowns pivoted in the transition of state power. Contrary to the use of doubt in the previous chapter, in Ukraine scientific indeterminacy eroded the bulwarks of expertise and granted weight to voices

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<sup>72</sup> Conversation with Paul Stewart on 17 August, 2011 in coastal Massachusetts, where he moved after being displaced from Mississippi by Katrina and enrolling in Law School.

beyond the authoritative “privileged few” (Petryna 2002: 28). It is through these fissures in scientific certitude that hundreds of thousands of Chernobyl clean-up workers—and families from contaminated areas—laid claim, by way of their radiation sicknesses, to the entitlements of a biologized citizenship.

Predictably, transnational lending agencies such as the International Monetary Fund (IMF) and the World Bank condemned the state-run Chernobyl Fund, the purse of its radiological welfare apparatus, labeling it “dead weight.” In 1996, the state halved its financing of the Chernobyl Fund. This reduction in social welfare expenditure filled a key requirement of the IMF’s lending policy and was quickly followed by a \$2.2 billion IMF loan (Petryna 2002: 114). Even in post-Soviet Ukraine, neoliberal reforms worked to cauterize the avenues of accountability that make up the lifeline of biological citizenship.

As Petryna depicts it, biological citizenship in the Ukraine was in many ways a perfect storm—balanced on a precarious perch as the State simultaneously countered and drew upon Soviet structures in response to Chernobyl. Katrina, and the recovery from it, was a very different storm. A storm that expedited neoliberal reform in a region where industry and environmental regulations were already ill enforced. In comparison to Chernobyl and Katrina, the FEMA trailer controversy was hardly a storm at all. While Geiger counters across the globe registered the nuclear disaster at Chernobyl and while news of Hurricane Katrina’s destruction was heard worldwide, the eventfulness of the distributed chemical exposures of the FEMA trailers never fully solidified.

In her multi-sited explication of the mechanisms that structure economies of abandonment, Povinelli asserts that in neoliberalism “making die, letting die and making live are organized within and through a specific imaginary of the event and eventfulness” (Povinelli 2011: 134). Toxicological thresholds delimiting harmful exposure are sculpted by

the neoliberal economies of forestalled industrial regulation and tied to thresholds of eventfulness (Sapien 2010b). As detailed in the previous chapter, those chronically inhaling chemicals that fail to reach ‘levels of concern’ are in turn exposed to the harsh biopolitical realities of a growing grey zone between being *made live* and being *let* or *made die*.<sup>73</sup> These muted ailments, indistinct happenings, and nebulous etiologies constitute the form of neoliberalism’s wounding.

While convenient and inline with much of the literature, it would be wrong to paint the differences between the case at hand and Chernobyl as purely determined by the political economy—the dissimilarity between the neoliberal and the post-Soviet contexts, avenues of accountability, and imaginaries of eventfulness. First, I should be careful to not totalize neoliberalism. To, as Bruno Latour laments, “jump straight ahead to connect vast arrays of life and history, to mobilize gigantic forces, [...] to reveal behind the scenes some dark powers pulling the strings” (2005: 22). Stephen Collier questions the coherence of neoliberalism as deployed by both Naomi Klein (cited earlier in this chapter) and David Harvey (cited heavily in the Chapter 5), among others. Based on his study of post-Soviet urban planning in Russia, Collier urges social theorists to not think of neoliberalism “as though an abstract blueprint was imposed on a prior reality” (Collier 2011: 19). Yet, as outlined above, in New Orleans the situated practice of neoliberalism *was* that of ideologues directly influencing policy due to both local histories of deregulation and the completeness of “blueprint” actualization afforded by the “blank slate” of catastrophic physical destruction. Similarly, Petryna’s study was conducted during the 1990s, which Collier concedes was

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<sup>73</sup> While similar to Joao Biehl’s “zones of social abandonment” in that such exposures are “a thermometer of the political unimportance of human life” (2005: 60), geographically distributed low-dose exposures to invisible chemicals are fundamentally less eventful and less likely to inspire public and scientific concern when compared to the spectacular concentration of human squalor documented by Beihl in the Brazilian rehabilitation center known as Vita.

when neoliberalism's "grandiose transformative ambition" was at its most pure in the post-Soviet world (ibid: 2). Consequently, pointing to IMF-imposed structural readjustment as an unequivocal instance of neoliberalism also avoids the perils of spuriously labeling social forces.

Second, I should not romanticize biological citizens or the Chernobyl welfare apparatus. Petryna does not do so either. Rather, she documents the struggles of the exposed to make do amid rampant corruption in the allocation of state funds, a torturous transition to the open market, and deteriorating health. The book is utterly dystopic. Petryna depicts a situation in which intentional radiation exposure—and thus greater welfare entitlements—was a way to shield oneself from exposure to the vagaries of the free market. Moving closer to death by way of increasing time spent in radioactively contaminated areas was one of the few routes to survival.

Fassin points to *Life Exposed* as a triumph of blending together the biographical elements of suffering with the technical elements of atomic science (Fassin 2011: 190). Yet, the life histories Petryna opens up are circumscribed by engagement with science and the Chernobyl compensation apparatus. Informants are limited to a focus on the hardships of a globally recognized event, a methodological move that de-emphasizes the ongoing suffering that occurs as the background of biological citizenship and, perhaps, tacitly buys into the governing logics of the Ukrainian compensation apparatus. Taking a step back, the Chernobyl recompense scheme could also be seen as a masquerade of care—an attempt to seize upon a critical event to distract from the state's incapacity to care for all. Fassin's conception of life as "a lapse of time full of events that can be narrated" (ibid), parallels Petryna's analytical scope that narrates a minority event as a national phenomenon at the expense of the interstitial and uneventful struggle of those outside of state, medical, and scientific attention.

This re-reading of *Life Exposed* through the lens of eventfulness, casts some doubt back onto Povinelli's implication that the contours of event and eventfulness in neoliberalism are easily distinguished from other economic regimes. In both the neoliberal and post-Soviet context events are politically capitalized upon to mask chronic suffering. The differences between the biological citizens Petryna documents and the FEMA trailer inhabitants I encountered stem not only from differing political-economic systems and their attendant social welfare practices but can also be attributed to variations in the multiple criteria of eventfulness (dose, point source vs. non-point source, spatial and temporal distribution etc.) for each exposure. Both the top-down deployment and the bottom-up expectation and pursuit of accountability can, at least in part, be attributed to the divergent claims on eventfulness. What is more, these two facets—eventfulness and neoliberalism—may not be co-constitutive to the extent advanced by Povinelli.

Although this chapter focuses on processes of enervation and abandonment that eclipse biological citizenship in the Gulf South, the endurance of formaldehyde exposures have not been without small victories and minor recognitions in the eyes of the state. The June, 2011 release of the National Toxicology Program's 12<sup>th</sup> Report on Carcinogens, updated formaldehyde's status from a "reasonably anticipated human carcinogen," as it had been since 1981, to "a known human carcinogen." Becky Gillette, an advocate for chemically exposed FEMA trailer residents, wrote an exhilarated email to her listserv:

Formaldehyde should have been named a carcinogen 30 years ago. But FINALLY it has been done, and I think many people on this list had a major role in that. So here's a virtual CHEERS!!!! To all of you on this list who got sick from formaldehyde and had the courage to stand up and do something about it!!<sup>74</sup>

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<sup>74</sup> Email from Becky Gillette to her "formaldehyde list," 6 June 2011.

Paul Stewart, who is widely credited as being the original FEMA trailer formaldehyde whistle blower, responded in a similarly ebullient fashion, “All I can say is that it was ALL worth it. Becky we should be proud! Working together, we have all made a change that will positively effect millions for generations to come!!”<sup>75</sup> While Becky and Paul’s enthusiasm was a welcome break from the bleak dispatches that normally populate her listserv, the National Toxicology Program holds no regulatory powers. Further, no studies on FEMA trailer formaldehyde exposure and cancer rates were considered in the review, as none have been conducted.

Concurrent to the release of the Report on Carcinogens in 2011, a congressman from New Orleans proposed the Travel Trailer Residents' Health Registry Act (H.R.2138), to monitor and provide medical welfare for sick former FEMA trailer inhabitants. The bill has since languished in the House Subcommittee on Health, a fate that most FEMA trailer residents would have predicted. Although the Act would have been the most direct route to biological citizenship and State recognition of injury, the Act’s passage was so implausible that Becky circulated notice of the proposed act just once and without comment. The plan only garnered four sentences in New Orleans’ daily newspaper, the *Times-Picayune*. The region’s disinterest in the FEMA trailers was most concisely epitomized by a reader comment to the *Times-Picayune* article on the proposed Act, “I am finished with the FEMA trailers I had to live in from 2005-2007. Don't bother me with anything more about them. The real gripe should be about the trailer boneyards along Interstate 12 across the Lake; how long are those hulks by the thousands going to be parked there to rot?”<sup>76</sup> The trailers, to those who

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<sup>75</sup> Email from Paul Stewart to Becky Gillette, forwarded to her “formaldehyde list,” 14 June 2011.

<sup>76</sup> Comment made by frequent nola.com commenter “GrisGrisMama” (a Gris Gris is voodoo amulet) on 12 June 2011 [http://www.nola.com/politics/index.ssf/2011/06/rep\\_cedric\\_richmond\\_calls\\_for.html](http://www.nola.com/politics/index.ssf/2011/06/rep_cedric_richmond_calls_for.html)

were not experiencing unrelenting and profound injuries, had been relegated to an aesthetic issue, cluttering the landscape and symbolizing an incomplete transition to normalcy. The proposed bill was a gesture towards justice, but a vacant one. Its creation was a hollow action in the same vein as enrolling the formaldehyde lawsuit.

Michelle Murphy points out that hope is a vital ingredient in biological citizenship projects and that such endeavors, “by their very focus, tend to conjure a hopeful relation to the state—an optimism about the possibilities of pollution regulation, or about the state’s commitment to health, product testing, safe food and so on” (Murphy 2008: 699). She goes on to note the diminishing optimism of the chemically infused when looking to the state. In a relatively recent historical turn, NGOs—like the Louisiana Bucket Brigade or WE ACT in Harlem—have risen as the primary brokers of attempts at biological citizenship as they conduct environmental monitoring, collectivize data, and advocate alongside and on behalf of the exposed.

Such efforts are exemplified by Daniella’s environmental law clinic. But unlike the place-based chemical subjection of fence-line communities exposed to industrial pollution or exposed workers regulated by occupational accountability structures, FEMA trailer inhabitants are not preexisting communities bound by geographic space, NGOs, or labor unions. They have limited means of accumulating their complaints and organizing. Other than the shared enervation of life in the trailers, their inhabitants are bound only by the destruction of their homes. Post-Katrina life was filled with an incessant stream of crises that, for many, rendered their stay in the FEMA trailers indistinct—just another inauspicious affair amongst many.

### **If You Ever Find Out Please Let Me Know**

“I have a lawsuit. An individual lawsuit” She recalled with indifference, “I haven’t talked to my lawyers but once and that was years ago. I don’t care.”<sup>77</sup> Gazing across the living room at her third child who sat askew in his car seat, his neck locked in a perpetual leftward glance, toes at a constant point, she continued, “There is nothing I can do about it... except take care of him.” Rhett was conceived and largely brought to term in a FEMA trailer in Pass Christian, Mississippi. His gestation would have been fully housed by the trailer if his mother, Lizzie, had not fallen ill.

The “new car smell” that so excited her and served as an indication of the trailer’s value when they moved in, became overwhelming during the heightened olfactory perception of pregnancy.<sup>78</sup> Lizzie would vomit every time she entered the trailer. She was eventually hospitalized for dehydration. After moving to another FEMA trailer that was less pungent, her symptoms abated in a couple of weeks.

To a large extent Rhett was a healthy baby. Yet, his legs would turn blue as a blueberry from time to time, leaving little purple polka dots along his legs when the spells had passed. Sometimes he would also stop breathing. Doctors were unsure what to make of his blue bouts as they could hear the blood was flowing through his arteries—“shwoosh shwoosh shwoosh.” “Its really intriguing,” one doctor told Lizzie, “If you ever find out, please let me know.” About Rhett’s occasional apnoeic episode, they were less alarmed, “babies do that.”

While Lizzie was away at a night class for nursing school, Rhett, then six months old, stopped breathing again. Her husband, who was watching the other two children, called 911

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<sup>77</sup> This and all following quotes from Lizzie occurred on 24 June 2011, unless otherwise specified. Our two-hour conversation took place in Southaven Mississippi, a suburban city of thirty thousand on the northern border with Tennessee, just south of Memphis.

<sup>78</sup> For the history and sensory politics of the ‘new car smell’ as it related to domestic chemical exposure, see the penultimate section in Chapter 6.

and performed CPR until an ambulance arrived six minutes later. He was admitted dead on arrival to the ER. After several minutes of fervent resuscitation, a determined female doctor revived him. He was documented as dead for 16 minutes, but in all likelihood the actual duration was twice that. Lizzie didn't leave the hospital for six months during his convalescence. Lizzie and Rhett's triumphant return home turned bittersweet as her husband 'disappeared' when she got home. He was, apparently, too traumatized to see Rhett again.

As we sat in her quiet suburban home, Lizzie began to list the slew of diagnoses that stemmed from Rhett's anoxic brain injuries with a sweet and slight southern twang, "Quadroparalytic, cerebral palsy, cortical blindness, drop foot—you see his feet, his tendons are shortened, Scoliosis, pharyngeal dysphasia—which means he can't swallow. It just goes on and on... You want a run down of our daily routine? That suction machine [pointing], I have to stick a tube down his throat like 50 times a day at least." For a series of months Rhett was seizing 700 times a day, then 200-400 times a day for two years.

Almost two years after Rhett returned from the hospital, Lizzie rekindled with the father of her first child and remarried. A month into their marriage Lizzie's husband committed suicide. Rhett's seizures stopped when his stepfather died. "I don't understand the connection, but innit that weird? Not one. They did a week long EEG and there was not one," Lizzie explained with a slightly distant look on her face, her eyebrows lingered, slightly raised, "Last time there was 324." The TV guide channel murmured in the background. The elder of the two girls that were playing on the floor, on the other side of the coffee table, responded to the eerie aura by pausing, then reminiscing, "Every time he would kiss you his beard would tickle [you]." "Okay we are not going to talk about that Christi..."

Rhett's older brother developed asthma and severe eczema in the trailer, "his skin just started peeling off in there," Lizzie recounted, snapping back from her mournful nostalgia.

Like his mother he also started throwing up with a high frequency. Yet, unlike his mother, he didn't stop vomiting when they left the trailer. For years he averaged three to four upchucks a week, "They would call me from school 'Can you come get Dylan? He's throwing up.' And I'm like 'Ugh. He just throws up! I can't come and get him every single time he throws up.' He missed like 30 days of school because I had to go get him because he was throwing up." Now Dylan is also taking ADHD medicine that adds to his queasiness. Since they lived in the trailer he has had to bring a large cup with him whenever he rides in a car. From time to time Lizzie will catch a glimpse of him in the rearview mirror of her minivan, quietly puking in the backseat. The little eruptions, once urgent signs of some latent disturbance slowly became engrained in the rhythms of the ordinary.<sup>79</sup>

Taking a deep breath, Lizzie returns to the litigation:

I know there's not going to be any amount of money that is going to make up for what happened. So that's why I'm not so fully involved in all of that. Because I wouldn't care if they gave 100 million dollars out to everyone. [...] So it [litigation] doesn't really interest me much cause there's nothing that can really make it okay. There is not going to be an answer. I never will know anything for sure[...].

Rhett's injury leads to an ever-present past. A horizon that is unflinching to litigation's promise of monetary restoration. Litigation was a gesture of disappointment that was complete upon filing and not a forward-looking action brimming with expectation.

*There is not going to be an answer* Unlike Mac's original position of statistical futurism, Lizzie sees no imminent knowledge in the future that will make sense of her family's injuries or greater misfortune. Under the weight of biological and economic reality she does not engage in the psycho-linguistic labor of rendering her story open, in a "subjunctive mode" (Good & DelVecchio-Good 1994). She is not struggling to justify hope

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<sup>79</sup> "Things flash up—little worlds, bad impulses, events live with some kind of charge. Sudden eruptions are fascinating beyond all reason, as if they're diving rods articulating something. But what?" (Stewart 2007: 68).

or pine for fantasy solutions, as she has come to the tacit awareness of the increasing cruelty of optimism. Hopeful trajectories to the “good life” in neoliberalizing States have, as Lauren Berlant has observed, “become *more* phantasmatic, with less and less relation to how people can live—as the blueprint has faded” (Berlant 2011: 11). Whereas hope, that fundamental substrate of biological citizenship, may make life more bearable in other similar situations, here it is seen as more trouble than it’s worth. Lizzie’s focus is pushing back on the constant past-becoming-present of Rhett’s disabilities, a struggle that now also takes precedent in Mac’s life. While both Mac and Lizzie have enrolled in toxic tort litigation, their signatures belied their lack of hope in the litigation’s outcome.

In June of 2012, Rhett’s two front teeth fell out. Lizzie posted on Facebook that she broke down crying—it was an all too literal kick in the teeth. Just another disfigurement, one amongst the many diminutive horrors he has endured. Mid-sob she realized him losing his teeth was actually “a wonderful and natural thing. That he is 5 and that is what happens when a child is that age.” His corporal relation to trauma and the ordinary is inverse to his brother’s occasional eruptions of bodily disturbance. Although Rhett’s body is dominated by a traumatic formation of time, haunted by his past in the trailer, on rare occasions normative measures of time unexpectedly break through, conjuring hope and the counting of blessings.

Despite the omnipresence of family illness that she attributes to the FEMA trailer, Lizzie has pushed her interest in formaldehyde into the past. She recounted a phone call with a friend that occurred just before I came over to her new home in a suburb south of Memphis in the summer of 2011:

My friend just asked me what I was doing and I told him I was waiting on you and he was like, ‘for what?’ and I was like ‘formaldehyde stuff...’ He was like ‘FOR WHAT?!’ He don’t even know, I know him and he has no idea. I don’t mention it. It consumed me for a really long time, researching and trying to

figure out why and what and how and what could have been  
and I had to let it go...

Rhett started to gurgle. Changing her tone, she sprang up, “here you can actually see.” Lizzie jumped around the coffee table and began to suction Rhett’s throat. “Cough it up! COUGH IT BACK UP!” She ordered with increasing sternness. The mucus that was causing him to gag whipped through the clear tubing of the suction device. With relief she lulled, “That’s good, Rhett. You needed that.”



**Figure 3.1 Lizzie suctioning mucus from Rhett’s mouth, 24 June 2011, Southaven Mississippi.**

## **Legal Disinterest**

As both legal scholars and anthropologists have noted, Americans’ reputation as hyper-vigilant injury litigators falls short of veracity in the realm of injury tort. Lizzie and other likeminded informants are not alone in experiencing legal disinterest. A number of

quantitative studies indicate that of those injured, some ninety percent don't bring suit (reviewed in Danzon 1985: 19-21, 23; Abel 1997 448-450; Nader 2002: 203). This trend is especially pronounced when consumers receive a defective or injurious product. An American Bar Foundation-American Bar Association study established that of American consumers who found major purchases to be faulty, seven percent consulted a lawyer (Curran 1977: 146). As legal scholar Richard Able summarizes, "The tort system does not encourage fraud or display excessive generosity but fails to [...] discourage unreasonable risks" (Able 1997: 447). In other words, the possibility of litigation does not prevent "unreasonable" risks precisely because such litigation is predictably undersubscribed.

Qualitative researchers have also noted social pressures that discourage the filing of injury claims (*cf* Engel 1984). In her ethnography of a New England courthouse, anthropologist Sally Engel Merry found that her informants, largely white and working class, availed themselves of the law with much reluctance and only after other means of mediation were found ineffective (Merry 1990: 3, 172). Not only is the American will to sue often a last-ditch effort of a vast minority of injured parties but also all of my informants who had filed suit were, quite rightly, incredulous of the purported windfall profitability of mass tort. Prior to and during my tenure at the law office I bought into the prospect of a lucrative payout and possible punitive damages, if nothing else, for involved plaintiffs.

In her largely archival research on American injury law, anthropologist Sarah Lochlann Jain falls prey to this same promissory rhetoric, asserting, "[at] every level of the onion, injury in the United States is unreservedly saturated in money" (Jain 2006: 47). While plaintiff and defense lawyers, health care systems treating injury, pharmaceutical companies, and corporations profiting off potentially injury-causing cost-cutting measures may well benefit from mass produced injury, mass toxic torts are unlikely to bathe non-occupational

plaintiffs in cash. These injuries are profitable to all parties involved other than the injured themselves.<sup>80</sup> In the case at hand this is due to the particular politics of uncertainty surrounding low-level chemical exposure, the complexities of the state of emergency, and the structure of mass torts.

Shortly before the paltry (in per capita terms < \$250) settlement offer in the spring of 2012, a lawyer in white suburb north of Jackson, Mississippi frankly explained the process to me. “Come on, these kinds of tort are not designed to pay plaintiffs. If and in they win, lawyers get paid, not the plaintiffs,”<sup>81</sup> he stated blankly, then slowly released a stream of chewing tobacco-admixed-saliva into an empty Mr. Pibb soda can. Even before numbers were on the table, the FEMA trailer inhabitants I spoke with were aware of the dismal figures that would soon be slid their way. There was both a spoken and unspoken recognition of the vacancy of litigation’s promise. They were aware that the case would likely settle and therefore no wrongdoing would be admitted. They were aware they would likely receive only a pittance. Most were in essence, just going through the motions of justice, which did confer some sense of conscientiousness, however gloomy. In June of 2013, while hospitalized for breathing difficulty, Mac received notice that his claim had been evaluated to be worth \$228.07.

As previously stated, claims of governmental malfeasance have been categorically dismissed, around 75,000-90,000 (plaintiff lawyers acknowledge that even this range is speculative) of these cases have been settled for paltry sums and will not code to legal misconduct. But what is more important to me is that these cases were not, by and large,

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<sup>80</sup> As an indicator of this phenomenon, of the 25,000 tort and contract trials that reached conclusion in state courts in 2005 less than 3% (700) were awarded punitive damages. The median award amount in cases with punitive awards was \$64,000 (Cohen & Harbacek 2011: 1). A far cry from being “saturated” in money.

<sup>81</sup> Conversation with a Mississippi attorney who was exploring the possibility of taking up *resold* FEMA trailer injury cases on April 21<sup>st</sup> 2012 in Ridgeland, Mississippi. He was referring to both the ongoing FEMA trailer lawsuit and a lawsuit that he and a consortium of lawyers were considering filing on behalf of resold FEMA trailer residents.

invested with the hopes of enfranchisement, let alone survival. As Mel Chen has observed, “toxic events make affective reference to other instances outside their temporal bounds” (Chen 2001: 266). Former FEMA trailer inhabitants’ horizons were not focused on the near future of toxic tort settlements but rather the persistent traumas of chemical exposure led to an anxious preoccupation with the present.

### **Without Conclusion**

For most people, the FEMA trailer was just one of many frustrations in the life-draining process of rebuilding. The whole region was fatigued as a result of the long-term stresses of large-scale disaster; by serpentine and opaque grant application processes; by family and friends who never returned; by plodding insurance claims responses; by the affects of living in a city that, for years, felt more like a ghost town. These physiological and economic consequences of catastrophe coalesce into a drawn out condition of “chronic disaster syndrome” (Adams et al. 2009).

Having borne witness to lawsuits conferring an array of civil rights in the past, elderly black FEMA trailer residents with chronic illnesses were more likely to hold their lawsuits both closer to their heart and in higher esteem. Yet even these plaintiffs maintained an emotional distance to the case. As one woman, undergoing chemotherapy told me, “I was let down [by the government], yes, I felt like that. I did. But [...] I’m just grateful that I am out of it, you see. Anger ... I’m like this, you can hold anger for so long and then you’ve got to turn it loose—simply because it will consume you. You just gotta move on.” *I felt like that. I did.* The emotions affiliated with an ongoing affliction were set in the past tense. The lawsuit was part of the process of “turning loose” the emotions of injury—by delegating it to the worry of an attorney—and moving on.

By and large, those who were chemically exposed and developed injuries while living in state-provided emergency housing units, known as FEMA trailers, did not seek to legally reassert a citizenship marred by their injuries. They only sought to endure. Enduring is both a capacity to withstand the wear and tear of formaldehyde inhalation and the temporal form of drawn-out low-level chemical exposures and chronic morbidity. Such modes of suffering proliferate within economies of abandonment and are composed of quasi-events. As a result these subtle and systematic mechanisms of injury are not “apprehended, evaluated and grasped as ethical and political demands in specific late liberal markets, publics, and states as opposed to crises and catastrophes that seem to necessitate ethical reflection and political civic engagement” (Povinelli 2011: 13-14).

Economies of abandonment and chronic disaster syndrome co-present in the post-Katrina Gulf South. This confluence results in amplified forms of national neoliberal currents and preempts the possibility of biological citizenship. In addition to an awareness of the shortcomings of mass settlements, the affects and temporality of ongoing illness were incommensurate with the promises of toxic tort and evacuate hope from legal proceedings. Further, concentrating on legal proceedings as a means to biological citizenship implicitly requires focusing on the biomedically-defined diseases that are eventful-enough to draw recompense. Such a focus is at the expense of the everyday disruptions, exhaustions, and decompositions that make up the mainstay of the lived experience of former FEMA trailer residents. Additionally, to focus on FEMA trailer-induced illnesses primarily through the bio-legal lens is to analytically reproduce the disqualifying fields of value that undergird the economies of abandonment in the Gulf South.

## **RE-STAGING AREA**

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### The Afterlives of the FEMA Trailers

For the mobile home industry Katrina was a boon, at least in the short term. Manufacturers secured lucrative no-bid contracts and acquired the capital to open new plants. Gulf Stream, Inc. secured the largest emergency housing contracts. The salaries of their co-presidents doubled in 2005 to \$1,260,000 and remained at that level in 2006 while they continued trailer production before returning to the \$500,000s in 2007 (Majority Staff Analysis 2008: 19). Many RV dealerships sold their entire inventory to FEMA. Others enjoyed prolonged income as they sold large quantities of mobile home replacement parts to maintenance contractors. Yet, as lumbering and costly lawsuits began to unfold and FEMA began to resell the trailers for as little as a dollar each, the hurricane-force gale that sustained their windfall-profits subsided, then reversed.

Litigation costs would force some smaller manufacturers to declare bankruptcy, surviving companies braced for the drop in sales when dirt-cheap former FEMA trailers flooded the market. As used units were returned to FEMA, the General Service Administration (GSA) resold them at auction. A November 2007 court order suspended the dispersal of FEMA trailers until 2010, retaining them as possible evidence in the formaldehyde lawsuit. The litigation staved off the inundation of the market by FEMA trailers for a little over two years. Six months after the mandated moratorium, FEMA began to back pedal on their previously auctioned trailers and offered refunds to the purchasers of potentially contaminated travel trailers and park models. Of the 10,839 units sold by January 2008 (AP 2008), government records I consulted show that fewer than 1,000 were refunded.

This is largely due to the impracticality of the refund scheme, as it was not an actual recall. The government would reimburse trailer owners who brought their trailers back to the site of purchase, but would not cover transport costs, which often equaled or exceeded the initial price of the unit. Further, resellers that “flipped” trailers for tidy profits—often by misrepresenting their quality and origin—had no incentive to forfeit their gains so as to facilitate the refund process for their clients. Secondary purchasers were stuck with their trailers even if they could not live in them due to chemical-induced illness. Further, few could ethically justify reselling them and passing their predicament down the line. For many of the early purchasers, the trailers became permanent but disused features of their lives. A woman in rural Missouri, who will be introduced in Chapter 5, referred to the abandoned FEMA trailer in her front yard as her “shameful lawn ornament.” She bought the unit in 2007. The trailer registered an elevated level of formaldehyde in its indoor air, and she refuses to sell it out of principle. By 2011, when I visited her, the trailer had become little more than a breeding ground and cemetery for ladybugs. Her husband shook his head silently while mowing around it.

On January 1<sup>st</sup> 2010, the court ordered moratorium on trailer sales ended, and the FEMA trailers that had lain fallow for years began to be resold at public auctions and at fire sale prices. The GSA attempted to sever the health liability of selling potentially contaminated units by adhering bumper stickers onto the windows of the FEMA trailers that stated in red lettering “NOT TO BE USED AS HOUSING.” Many of the units would indeed be used and resold as housing.

By 2010, the slumped economy resulting from the 2008 financial crisis had taken a significant toll on the mobile home industry. An outpouring of used units, some selling at 3 percent of their resell value, added further industry dread and hand

wringing. As the spokesman for the Recreational Vehicle Industry Association told reporters, "This isn't really the best time for the RV industry to have very low-priced trailers put out onto the market" (AP 2010). Less than two weeks into the resale of the FEMA trailers, a magnitude-7 earthquake convulsed across Haiti, decimating the country and much of its housing stock.

Manufacturers read the Haitian earthquake as potentially calamitous godsend. The RV industry began lobbying Congress and meeting with disaster relief agencies in the hopes of shipping off the FEMA trailers to Haiti, and thereby ridding American markets of their glut. Just as the problems of war often appear to be best solved with further war, the aftershocks of post-disaster overproduction appeared to be best remedied with a second disaster. The earthquake would clean-up the vexing remainders of hurricane response.

Upon hearing word of the proposition, Haitian governmental officials stated that they would not accept the trailers. Some of those rendered homeless by the tremors concurred with the government's critical response. As one shelterless woman commented to the Associated Press, "We have nothing. But I would rather sleep outside than be in a metal box full of chemicals." Others still wondered if accepting the trailers would yield a small net gain. A man living in a tent near the Port-au-Prince airport wondered out loud, "The trailers may be hot, and they may make us sick, but look at how we are living already. How bad can it be?" (AP 2010).

The proposition to export the FEMA trailers to Haiti bore more backlash than momentum and never amounted to more than a spark in the pan. But this flash of international media attention over the proposed transfer of the FEMA trailers illuminated the dilemmas and logics of the *actual* large-scale redistribution of the trailers across the United States. The incident foreshadowed how the market would

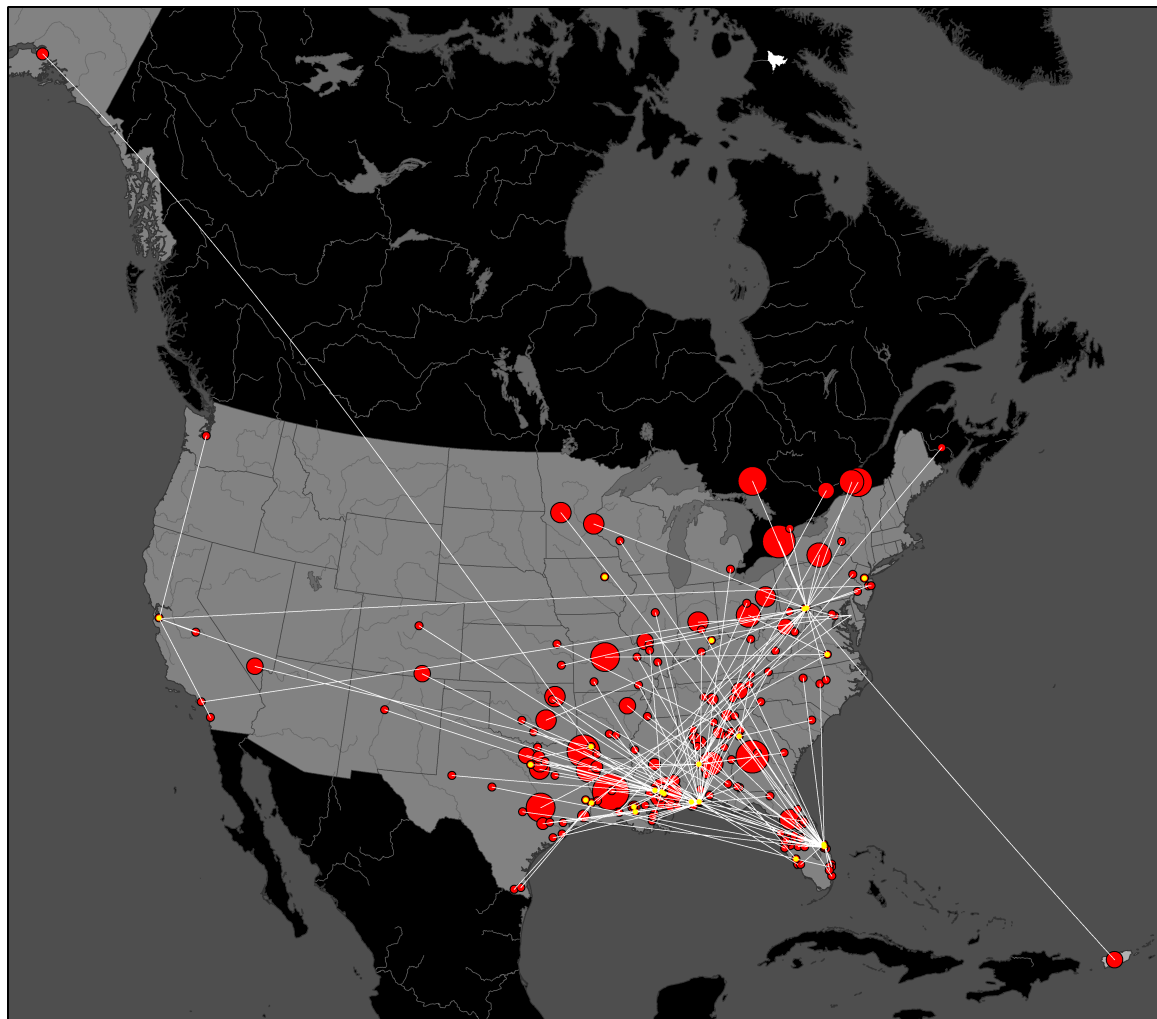
mediate the trailers' homing pigeon-like pursuit of the precarious and dispossessed. Over the course of the next two years the FEMA trailers would come to roost in pockets of housing distress from Florida to Oregon. The Haitian proposal also prefigured the desperate calculus, "How bad can it be?" that ran through the minds of inhabitants-to-be who turned to the FEMA trailers as shelters of last resort.

As they were resold, some FEMA trailers were used for many purposes besides permanent or seasonal housing. I have encountered them as lake houses in Missouri and Georgia, a weekend camper for members of the Coast Guard in Michigan, a senior citizen recreation center in Oklahoma, the office of a gun range in Mississippi, the office of a telemarketer in Alabama, and as hunting camps all over the country. To be sure, many FEMA trailers did end up being used recreationally and professionally as opposed to strictly residentially, but the final disposition of the vast majority of units is that of a home. The following two chapters focus primarily on the resale of these units as homes. The final chapter then scales up to detail how domestic chemical exposures in general—not just those of the FEMA trailers—are corporeally apprehended.

## **Method**

The second half of this thesis emerges out of the national dispersion of the FEMA trailers. The scale of distribution is greater than the regionally bound-illocality of the FEMA trailers' original deployment. To gain access to inhabitants scattered across the country I was forced to undertake a methodological approach that diverges from that of the first half of this thesis. Despite my focus in Chapter 1 on distribution and geographic discontinuity, finding former FEMA trailer inhabitants along the Gulf Coast was relatively easy, as my social network, non-profits, activists, journalists, and

colleagues brought me into contact with a representative cross section of the desired demographic.



**FEMA trailer destinations (#)**

- 0 - 120
- 121 - 392
- 393 - 789
- 790 - 1697
- 1698 - 3265
- 3266 - 5903
- 5904 - 9904
- 9905 - 32999

**Figure RS.1 Map depicting the resale of the FEMA trailers (2006-2011). Red dots indicate trailer destinations and yellow dots indicate trailer auction sites. Only the locations of the initial buyers are indicated on this map. Further resale locations and pathways would render this map as indecipherable as Figure 1.6. Data acquired by way of Freedom of Information Act requests. Map by Michael Athanson, Nick Shapiro, and Jakob Rosenzweig.**

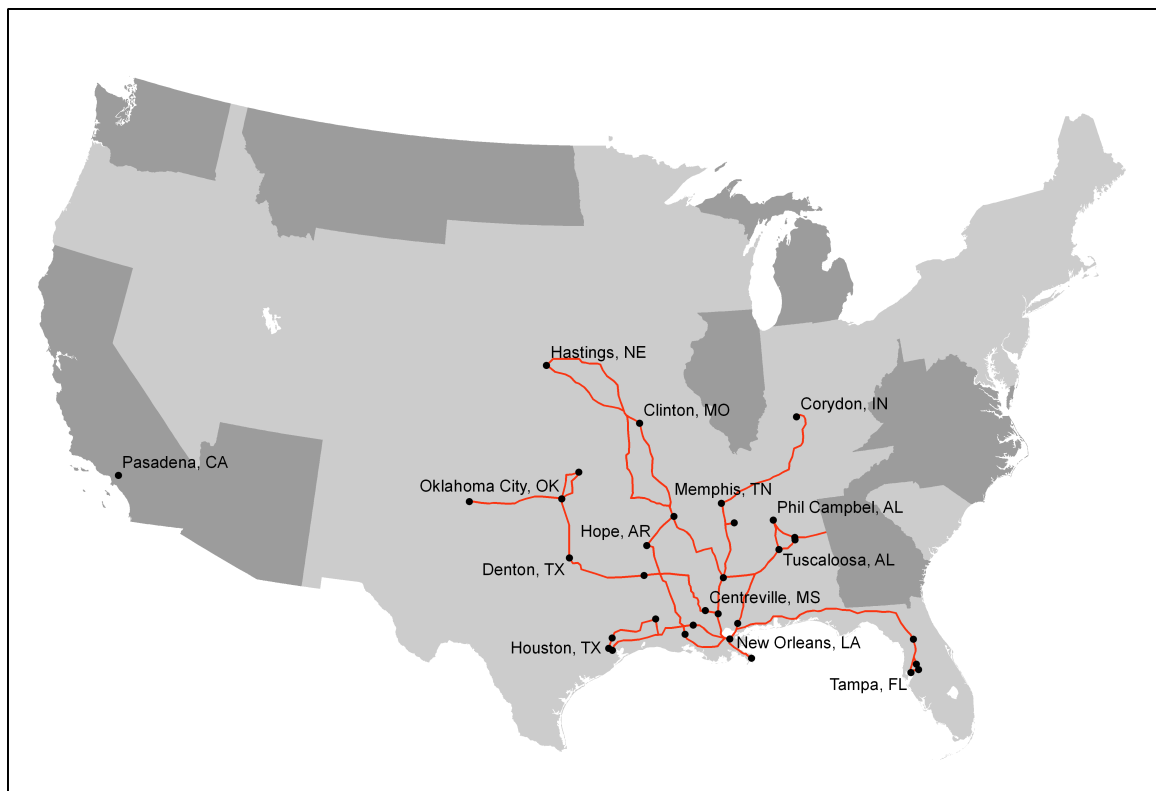
For the resold FEMA trailers there were no meeting grounds, no nodes to open up a network, no non-profits to aggregate cases, and a much more daunting scale of distribution. In short, the limitations on finding informants increased exponentially. In order to meet owners of resold FEMA trailers I had to invert my research participant recruitment strategy. I needed to make myself valuable so that they would find me, as odds were that I would not be able find them. To accomplish this task I collaborated with Kim Fortun's of interdisciplinary research group on environmental public health, known as the Asthma Files (*cf* Fortun 2012: 453-456). Professor Fortun provided both generous material support<sup>82</sup> 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. Martin Spartz PhD, an analytical chemist and chairman of Prism's board, together with industrial hygienist Linda Kincaid MPH, anthropologist of science and core member of the Asthma Files Brandon Costelloe-Kuehn PhD, and myself designed a formaldehyde testing protocol that could be performed by me or mailed to FEMA trailer inhabitants that were too far to visit and would hold constant as many variables as possible.<sup>83</sup> The Arkansas-based environmental activist Becky Gillette featured our call for participants on her website ([toxictrailers.org](http://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.

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<sup>82</sup> Funds were made available via Fortun's NSF Grant #0724684. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation.

<sup>83</sup> The homogeneity control protocol for our study were as follows: The indoor air temperature will be maintained at 72-75 degrees for at least 24 hours prior to testing. For tests administered by homeowners, photographic evidence of the thermostat is required (clear camera-phone pictures at the time of testing are sufficient. Preferably picture messaged to the study telephone at the time of testing to verify time of test). All windows should remain closed for 24 hours prior to test. All tests will occur at the same time of day. One hour sampling will begin between 1:30pm and 3pm, preferably at 2pm. Tests will not occur on rainy days, or days that are abnormally warm or cool, which will be defined by local norms. Tests will not occur on windy days (defined by: leaves and small twigs in constant motion, wind can extend a lightweight flag. Level three on the Beaufort Scale). The sampling device will be placed on a non-formaldehyde emitting surface in the middle of the bed in the master bedroom. Photographic evidence of the device location is also required.

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 year I would be contacted by over 100 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 resold FEMA trailer residents. I drove several thousands of miles, conducted in-person interviews of 40 trailer residents in 10 states and phone interviews in 11 additional states. In the course of this research I collected air quality samples from 24 resold FEMA trailers. Additionally, I observed and participated in real-time domestic formaldehyde assessment by two industrial hygienists in Pasadena, California.



**Figure RS.2** Map depicting my fieldsites across the US. The red line indicates routes traveled. Black dots indicate significant stopping points, yet many stopping points are not depicted. States shaded in dark grey indicate states in which I spoke with trailer residents by phone. Map by Michael Athanson and Nick Shapiro.

Before testing was initiated, trailers were verified as FEMA trailers by cross-referencing their Vehicle Identification Number with lists acquired from the federal government via Freedom of Information Act requests. Following verification, a structured survey was administered by phone (aprox. 40 minutes), followed by semi-structured interview in person or over the phone if I was unable to visit them. Visits ranged from two hours to three days.

Figure RS.3 FEMA Trailer Test Results, Ordered Chronologically (N=24)

City, State (# if multiple)	Type	Tester	Test Date	Formaldehyde Results (ppb)
Pasadena, TX (1)	Travel Trailer	Shapiro	11/4/2011	162.60
Pasadena, TX (2)	Travel Trailer	Shapiro	11/5/2011	63.41
Pasadena, TX (3)	Travel Trailer	Shapiro	11/5/2011	105.69
Fultondale, AL	Mobile Home	Shapiro	10/9/2011	113.82
Carriere, MS	Mobile Home	Shapiro	10/13/2011	105.69
Oklahoma City, OK (1)	Travel Trailer	Self-tested	2/25/2012	113.82
Hope, WV	Travel Trailer	Self-tested	12/3/2011	113.82
Belleview, FL	Travel Trailer	Shapiro	1/27/2012	121.95
Kentwood, IL	Travel Trailer	Self-tested	5/16/2012	97.56
Kendwood, IL (2)	Travel Trailer	Self-tested	5/17/2012	57.72
Oklahoma City, OK (2)	Travel Trailer	Shapiro	3/28/2012	Chain of Custody Error
Denton, TX	Mobile home	Shapiro	4/1/2012	39.02
Tuscon, AZ	Travel Trailer	Self-tested	5/10/2012	34.15
Ralston, OK (1)	Travel Trailer	Shapiro	3/31/2012	Chain of Custody Error
Ralston, OK (2)	Mobile Home	Shapiro	3/31/2012	Chain of Custody Error
Mount Clemens, MI	Travel Trailer	Self-tested	5/16/2012	50.41
Goldsboro, NC	Travel Trailer	Self-tested	5/19/2012	47.15
Bremen, GA	Travel Trailer	Self-tested	5/10/2012	138.21
Sandoval, IL	Mobile Home	Self-tested	5/23/2012	69.91
Ray, ND	Mobile Home	Self-tested	6/25/2012	43.09
Erath, LA	Park Model	Self-tested	6/27/2012	22.76
Canton, MS	Mobile Home	Self-tested	6/28/2012	38.21
Plant City, FL	Travel Trailer	Self-tested	7/27/2012	69.11
Youngsville, LA	Travel Trailer	Self-tested	8/4/2012	89.43
Town Creek, AL	Mobile Home	Self-tested	8/13/2012	20.33
			<b>Mean</b>	78.08

The differences in results between the trailers I tested and those tested by research participants failed to meet statistical significance in an unpaired T-test with a 95% confidence interval ( $P= 0.0562$ ). This lack of statistical significance, and the limited implications of these test in general, is presumably a result of the small sample size. Self-tested trailers averaged 34.69 parts per billion (ppb) lower than trailers I tested, which may indicate that preparation protocols were not strictly adhered to in my absence or that testing times were cut short. Both of these practices would bias test result towards lower results.

The average ambient indoor formaldehyde concentration across all tested units was 78.08 ppb. As outlined in Chapter 2, governmental toxicological thresholds are not only highly politically contingent constructs in general, but also the relative paucity of residential air quality data casts further doubt on the applicability of occupational indoor air recommendations to domestic settings. That being said, the average result of our testing falls short of the EPA's maximum recommended indoor formaldehyde level of 100 ppb. This concentration is also shy of the World Health Organization's (WHO) guideline exposure level of 81 ppb. The WHO claims that if 81 ppb is not surpassed short- and long-term health effects, including cancer risk, will be prevented (WHO 2010: 141). Yet this guideline is based on exposure durations of 30 minutes and not the day-in and day-out exposure yielded by contaminated domestic air space. The Agency for Toxic Substances and Disease Registry (ATSDR) notes that the negative health effects stemming from chronic formaldehyde exposure could begin at levels as low as 8 ppb—a threshold exceeded almost ten times over by the average of my findings. In April of 2008, FEMA issued a press release stating that all future emergency housing units acquired by the agency must register ambient formaldehyde levels below 16 ppb. This level was selected to bring indoor

concentrations of formaldehyde in emergency housing down to parity with the indoor air of conventional homes. The average of my results was almost five times higher than this federal standard, which stood as the *only* domestic air quality regulation in the US until it was quietly rescinded in October, 2011.<sup>84</sup>

Although the testing project was successful in its ethnographic objective of attracting the interest of far-flung trailer residents, and yielded indoor atmospheric documentation for enrolled inhabitants, the testing enterprise fell far short of its goal of testing 50 units.<sup>85</sup> This shortcoming is largely due to the unexpected loss of equipment. Namely, a number of individuals found and enrolled in the study, underwent a preliminary phone interview, were dispatched a test kit, but they did not return the testing equipment or the sample to the lab (via free prepaid postage). A dozen samples were not returned, which left the study short on equipment, shipping funding, and time. This deficiency in the natural scientific findings is anthropologically revealing, as it was the most precarious research participants who failed to complete the final pivotal step of returning the sample. The test results were what motivated the informants to reach out to me. An inability to complete the process is likely indicative of the multiple corrosive facets of ordinary life that compete for their attention.

## On the Road

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<sup>84</sup> The 300 ppb maximum allowable formaldehyde concentration in the construction materials of manufactured housing that I mentioned in the introduction is not, strictly speaking, an indoor air quality regulation. The threshold governs the emission rates of individual wood products in the isolation of a chamber test. The actual indoor air space of manufactured housing, a space constituted by a medley of engineered woods and often limited ventilation, is not regulated.

<sup>85</sup> A communication failure between the lab and myself voided the chain of custody—a paper trail that documents the entire lifecycle of the air samples—and therefore voided the validity of three tests I ran in Oklahoma. Two more tests I ran in Louisiana and one self-test in Illinois were discarded due to instrumentation failures.

American road networks are the arteries of FEMA trailer circulation. As I traveled the routes depicted in Figure RS.2, I would often pass or be passed by FEMA trailers in transit. In this way the spaces I traveled through, and not just the locations at which I stopped, are significant to this thesis. Kathleen Stewart has succinctly noted that roads not only convey vehicles and commodities but affects and dreamworlds, “Four million miles of it in the United States literally track the detritus of collective dreaming, the passing of historical presents, the spread of aggressively banal and ugly things as capitalism blanketed the country” (Stewart 2012: 522).

As one departs New Orleans by road, driving in any direction, FEMA trailers are unavoidable. They dot highway-view mobile home parks or sit in large numbers on the outskirts of cities and larger towns, awaiting future buyers. I observed such accumulations scattered across the South and up into the Midwest. Just outside Little Rock, Houston, or Shreveport fields of FEMA trailers accumulated in the interstitial spaces between suburban, industrial, and rural lands. Acres of FEMA trailers were flanked by similarly aggregated and identical commodities: looming towers of shipping containers, gatherings of school busses or junked cars, mobile home auctioneers, shed retailers, carpet wholesalers. The list goes on.

By the time I first set out on the road, in 2011, sales had reduced the critical masses of FEMA trailers to a scale that appeared out of the ordinary only upon a second look. But just six months earlier, the trailers were gathered in such vast numbers that, after passing storage areas, drivers often felt the need to pull over or slow down and pull out their cameras in order to comprehend what they had just seen.

Passersby would shoot YouTube videos while driving the length of FEMA trailer storage sites. Shot from a vehicle driving at 45 miles an hour, one video featured over two droning minutes of row after row of trailers while traversing the

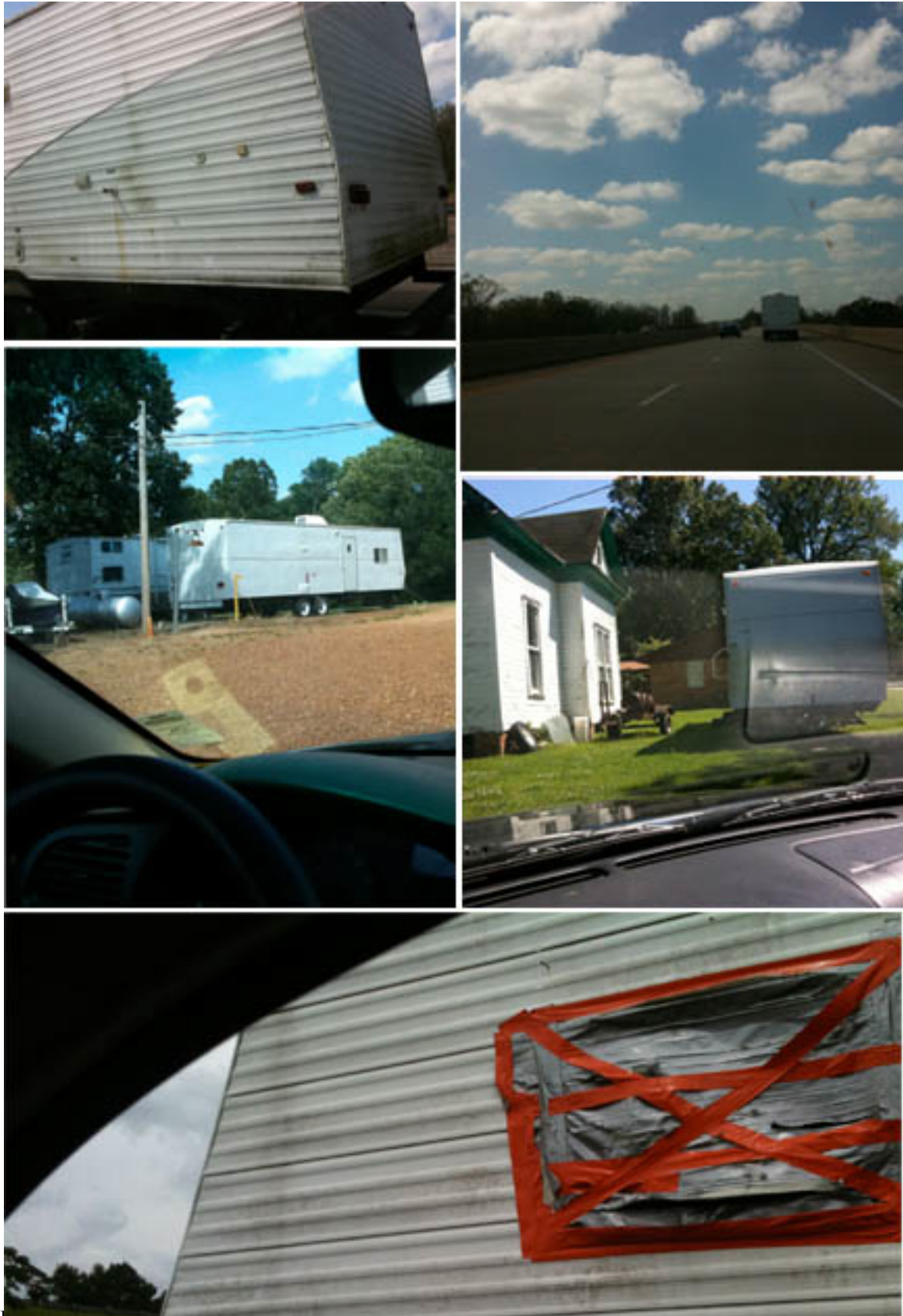


Figure KS.4 FEMA trailers on the road or by the road, 2010-2012.

length of a storage ground in Arkansas. On occasion, through a break in their tight-knit formation, the viewer can see that each row is hundreds of trailers deep. While

the terrestrial videos are staggering, from the air the full scalar sublime can be felt. Aerial videos of FEMA trailer storage sites taken from private planes or powered parachutes (essentially little more than parachutes propelled by lawnmower engines) have individually garnered between 150,000-200,000 online views at the time of writing.

These view numbers were the first hint of the aesthetic and speculative pull of the trailers. On the road, virtually everyone who I met by chance and asked me what I was doing had some interest in the FEMA trailers. Occupy activists in West Virginia spoke of the trailers being used as halfway houses for those departing prison. Waitresses and gas station attendants in Arkansas and Mississippi said they kept an eye out for massive accumulations of FEMA trailers. A retired Air Force man in Oklahoma regretted not buying one when they were cheap. A man in Maryland emailed me to see if it would be possible to export large amounts of FEMA trailers to Venezuela. A couple I met in a junk store in Arkansas hoped to use my trailer tracking knowledge to locate good deals on FEMA trailers to place in their trailer park.

A woman I spoke with at a bar in Houston in 2011 remembered pulling over to photograph a group of trailers, "Oh I know about those trailers! They were selling *tons* off Route 69 over by the airport. *I just had to stop*. I had to take a picture of them and I don't even know why!" In the stockpiling of FEMA trailers, mundane objects thicken into extraordinary sightings, aberrations in the anticipated landscape. Herds of trailers exert an affective pull that is the upshot of the very nature of the spectacular. As Debord wrote, "The spectacle is *capital* accumulated to the point that it becomes images" (1984 [1967]: 17, emphasis in original). I entered the field just as the spectacle of the trailers was being actively disassembled and embedded into the

ordinary—just as these somewhat infamous homes ceased to be focal points and objects of concern and once again became objects for inhabitation and sunk into the quotidian.



## CHAPTER 4

### At Home in the Surreal

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Imagine the lived effects of such a nervous system of signs and agencies. The sense of being at home in a place caught between a rock and hard place—at once protected from a threatening outside world and smothering [...].

—Kathleen Stewart (1996: 56)

In Alabama, just beyond Birmingham's suburbs an investigative journalist and I visited a man whose used car lot was overflowing with white boxy FEMA trailers. It was March of 2011. The previous week, several days of intermittent tornadoes had destroyed thousands of homes across Alabama, Arkansas, Georgia, Mississippi, Tennessee, and Virginia in what was arguably the largest tornado outbreak ever recorded (NOAA 2012). Alabama bore the destructive brunt of the storms. Just blocks away from my friend's house in Tuscaloosa, where the reporter and I were based for the weekend, houses were cleanly cut in two. Steel transmission towers stood wilted like under-watered daises. Whole apartment complexes were disassembled, scattered, and laid flat.

As the tornado cut diagonally through neighborhoods it opened up new lines of sight. The Tuscaloosa hospital became visible from a vantage point that had previously been obscured by homes. In New Orleans I had become accustomed to the residues of flood-related horizontal destruction that had disfigured ground floors beyond recognition while often leaving second stories unscathed. The axis of tornado ruination is not horizontal, but vertical and precise. Books lined the shelves of rooms that opened out onto empty concrete slabs. The wind had sheered off the facades of several homes, which stood exposed like dollhouses. The storms had zigzagged across

the roadways with caprice. When driving, scenes of complete destruction burst out of the ordinary only to subside moments later, as the run-of-the-mill landscape resumed.

A rural couple that we spoke with barely had enough warning from the tornado sirens to jump into their bathtub. The winds hoisted up their home in its entirety only to release it, moments later, sending it crashing down 10 feet askew of its foundation. After the storm they placed a privately acquired FEMA travel trailer in their front yard. They contemplated whether to rebuild or simply downsize to a mobile home.

Perhaps it was post-disaster reverence, inspired by the lumbering quiet that follows brutal destruction or perhaps it was his character, but the FEMA trailer reseller we met outside of Birmingham, whom I'll call Sid, was the most candid I encountered throughout my fieldwork.<sup>86</sup> The investigative journalist, Ariella, set up a meeting with Sid over the phone, having found his advertisements online. Upon arriving, Sid recognized us through the large showroom windows as we sorted through consent forms, clipboards, and notepads on the trunk of Ariella's car. He came out to greet us in the dirt parking lot. In a t-shirt and long jean shorts with patches of red embroidery running down the outer seams, he ushered us inside.

Seated at a table in his showroom, Sid downplayed the use of his trailers as residences, suggesting they were primarily being bought for recreational purposes—as lake houses or hunting camps—or simply for storage. As we spoke, an older man shakily walked into the otherwise empty showroom and announced, with wide seemingly shell-shocked eyes, “I need a home.” In black moccasins, aged but meticulously maintained jeans, and with a small tight mouth he stood by the door. Sid hesitated momentarily. To clarify any ambiguity in his situation the older man named

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<sup>86</sup> Others, understandably, stuck strictly to talking points, denied any flaws in the mass resale of these units, or refused to be interviewed altogether. I spoke with nine resellers in total, across six states. Many more refused to speak with me.

the tornado-torn backwoods area that he called home. Sid met our knowing looks with a small bow of his head before rushing off to show his new customer the available models.<sup>87</sup> Sid was no doubt selling FEMA trailers as permanent housing despite their legal designation as unfit for human habitation.

When Sid returned, he reasoned with us, “you can put [warning] stickers on ‘em all you want, but people are still going to live in ‘em if they *need* to live in ‘em.”

He continued:

I am just being real, cutting to the chase. The biggest thang is safety, health safety. If they [the government] gave the truth about the health safety, from head to toe, and let the general public know what to look for and what not to look for without going through a whole lotta red tape then it’s all good. But it ain’t about that, it’s about liabilities here and people can’t do no better, you got people homeless, sleep under doggone bridges. Where you think they gonna stay? In a trailer rather than under tha’ bridge? [Yeah] they gunna stay in a camper.

In Sid’s view, the use of FEMA trailers as homes is inevitable in a region where maintaining shelter is an enduring struggle for many. He contends that government’s prerogatives revolve around *liabilities* rather than *letting the general public know what to look for* and informing them of *health safety*.

Sid further avers that the use of these units as housing was based on necessity and the structural purpose of the units not on his salesmanship.<sup>88</sup> The fact that Sid was selling FEMA trailers was, in his view, simply acquiescence to their intended use, which was made manifest in their architecture. He was expressing the genuine

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<sup>87</sup> Later as Ariella and I pursued his trailer inventory I caught a glimpse of the older man, through an open trailer door. He sat cross-legged on the standard-issue sofa, his pursed lips had unclenched and eased into the content smile of someone coming home for the first time.

<sup>88</sup> He later did admit that salesmanship and the imagination of the reseller did play a part in opening up residential markets, “You gotta have a vision. You might buy some land. You might set ‘em up [on the bought land] and fix ‘em in better ways and already have places for folks to rent and go camping. Some people can’t afford to buy a camper but they can probably rent a spot that is already out there a place by the lake or whatever.” But he maintained that the foresight of reseller came secondary to their architecturally inscribed use as a home.

ontology of the trailer and not advancing deception. He maintained that the trailers were built to be lived in for extended periods of time:

The government also knows that people are going to live in them, I mean that's what they gave 'em for, I mean, people stayed in 'em, I mean. The government made 'em for folks to live in. I mean, it's not for permanent housing, you follow what I'm saying, but people lived in 'em. Some people lived in 'em more than a year. Ya, ya, ya Know?

The function of the trailers was self-evident to him, yet parsing out their specific affordances proved to be an exceedingly slippery task. The trailers did not fit snugly within existing residential categories. Every step of the way Sid had to batten down his meaning. *I mean* peppered Sid's speech when he attempted to distinguish how the trailers are used and what they are *for*. He similarly struggled to demonstrate durations that fall into the gap between temporary and permanent. Although he laid out his explanation in a straightforward manner, the vagary emergent in the space between the trailer's function and averred usage made it highly possible that I wasn't *following what he was saying*.<sup>89</sup>

But just as Sid "cut to the chase," his straight talk, secured by a cascade of refinements in meaning, began to recede. His lot, perched on a hill overlooking a two-lane highway, was adorned with a banner displaying the FEMA insignia and a hand drawn sign labeling it a "FEMA trailer liquidation site." The ontology of the trailers was woven together not just by architecture and reseller description but also by an improvised symbolic association with federal emergency response. As other resellers uniformly excluded the name "FEMA" from any advertising, I asked him, "What was it about *FEMAness* that was potentially appealing?" He leaned back in his chair, crossing his arms, "Now, that's a good question... maybe it is that the people are

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<sup>89</sup> This instance was the only time Sid displayed this linguistic pattern as it was the only time he tried to parse the various ontologies of the trailer. It was a telling aberration in his otherwise unencumbered language.

thinking that they are getting a good deal, which they are, they are saving money. [...] FEMA right now is a pretty good thing for the these [tornado displaced] folks... They see ‘FEMA’ and it helps us, so be it.”



**Figure 4.1 Resold FEMA trailer by empty foundation and leafless trees in Phil Campbell, AL, March 2011.**

*So be it.* Sid contends that his honest selling cuts through illusory warnings that fallaciously attempt to re-specify the trailers as something other than what they *are*. Yet he also deceptively aligns himself with the authority and value of FEMA in a disaster-wrought area. He reaps from a spurious symbolic affinity with the federal government, just as FEMA’s first disaster assistance checks were arriving in the tornadoes’ wake. He employs the visual appearance of the trailers and the FEMA crest in combination to trump the non-housing ontology mandated by the federal government’s terms of resale. His marketing tactic further infers that his outfit is a disaster relief program endorsed by the federal government and that his trailers are

sanctioned refuge for the displaced.

As I tracked the resale of the FEMA trailers across the country, these simplistic homes, composed of the most basic forms of the most basic amenities, began to appear increasingly complex. Permanent temporary housing. Housing that is most honestly sold for long-term inhabitation but is also marked by a considerable lack of “truth” about their “health safety.” Emergency housing units that are speciously sold as emergency housing units. Warning stickers that seem to undermine the very nature of the structure, while also doing almost nothing. These bare bones homes took on the qualities of a house of mirrors. From their illusorily low price tag—subsidized by their often hidden health costs—to loop-the-loop explanations of why formaldehyde disclosure forms are *always* necessary yet the chemical is *never* a problem, this chapter details the viscous surreality emergent in FEMA trailer re-inhabitation. Failures of matter, meaning, and dreams are entangled in the production of this manifestation of the surreal.

The surreal emerges from the mysterious chemistry of low-cost building materials that left an Alabama woman wondering if the vinyl siding of her trailer would melt off, or a Texas woman continuously running her hands across the small blister-like protrusions sprouting from her walls, trying to smooth them out. From sunken-in floors in Oklahoma, from shoddy wiring in Mississippi. From manufactured homes that are assembled by joining two identical halves as opposed to two corresponding halves, which results in a confusing architecture of ill-formed spaces, accidental floor plans, and anti-ergonomic frustrations. From chemical exposures emanating from FEMA mobile homes, and the airs of suspicion such invisible toxins ignite. From the material and imaginative decay, a de-familiarization of the home, a de-familiarization of one’s place in the world. Corrosive happenings

pattern the FEMA trailer's domesticity in a way that appears meaningless, puzzling, or at the most, enfeebling.

It is precisely in these accumulations of incoherent quasi-events and the failure of the home's symbolic protection that reality bows into the surreal. As film theoretician Elizabeth Cowie asserts, the "surreal appears whenever we encounter the absence and thus the failure of meaning" (Cowie 2007: 206). A FEMA trailer itself is not a surreal thing but rather it furnishes a surreal state of things, one that alters the temporal orientation of inhabitants as they brace against the possibility of unforeseen blows dealt to them by their home. The surreality of FEMA trailer life is *not* that of what Stanley Cavell has called the "surrealism of the habitual," which accounts for "the fantastic in what human beings will accustom themselves to" (Cavell 1986: 84). The surreal filaments of FEMA trailer domesticity are hardly routinized, as most attempted to actively resist their influence. The surreal can pattern the everyday without one acquiescing into the habitual, and this is the space of the ordinary for FEMA trailer residents: an everyday in which meanings, matter, and knowledge are left ajar.

This chapter delves into the illogics, dreamworlds, and material breakdowns that either emerge out of or are cut short by the FEMA trailers' re-circulation. If, as Lauren Berlant avers, "new ordinariness" requires "new realism" (2008: 6) then the liminal and non-normative ordinary of life in the FEMA trailers is also constitutive of a new reality; a reality most readily identifiable as surreality.

In the case at hand, the surreal is not a subversive interruption of the familiar by the avant-garde. The surreal is not the exclusive domain of modern art and literature. For my purposes, the surreal is a usual unusualness that is marked by material, biological, and semiotic decomposition. In the case at hand sureality is first

exuded by the practices of the federal government. The chapter begins by fleshing out Sid's observation that the elusive ontology of the FEMA trailers—the home that is not housing—is foundationally tied to the conditions of their resale as set by the government. The sheer incongruity of the “NOT TO BE USED AS HOUSING” sticker adhered to structures with three beds, a kitchen (including a full sized refrigerator), bathroom, dining area, and sofa introduced a schism between what FEMA trailers *are* and what they are *for*. The application of the warning sticker interrupted the familiar function of the trailer with a re-specification of its use, one that was simply defined by its otherness: not housing.

Historian James Clifford asserts, “A Surrealist practice [...] attacks the familiar, provoking the irruption of otherness” (Clifford 1981: 562). True to Clifford's description, the FEMA trailers are vectors of otherness. They are physical forms of Kathleen Stewart's technique of ethnographic description that condenses qualitative data into “a surreal space of intensification” (1996: 21). In relation to the FEMA trailers, “hallucinatory forces” are not required to “breach the order of mechanistic processes” (Einstein 1929: 95 in Clifford 1981: 549), as the German writer Carl Einstein insisted was a necessary act of surrealist defiance in inter-war Europe. Rather the state deploys, in the words of one inhabitant, “absurdist” and “dada” proclamations as instruments of governance and control. Indeed, the widening expanses between official proclamations of triumph and individual experiences of those freshly returned from the trenches of the First World War were catalysts of the surrealist movement (ibid: 541): Surrealism appropriated—rather than artistically assembled—a governmental genre of reality. In many ways the state is the original surrealist, along with the marketplace,<sup>90</sup> which provided phantasmagorical

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<sup>90</sup> In the inter-war period, French surrealists frequented the Marché aux Puces flea market for inspiring

rearrangements of the world's things. The FEMA trailers combine both of these wellsprings of the surreal as loose regimes of governance and market logics are inscribed in and performed by these trailers.

But the surreal does not solely radiate from the out-of-touch claims of the state, or the seemingly spontaneous juxtapositions of the market. Surreality, a reality beyond the immediately observable—is a fundamental texture of what Kathleen Stewart refers to as “other” America (Stewart 1996)—an America made up of disparate and excluded landscapes. Landscapes that bare profound similarities to those detailed in this and the following chapter. While Stewart leads the charge in elucidating the surreal textures of “other” America, her focus on *narrative* space affords considerable room for the elaboration of matter's role in the form of the ordinary.

The surreal is not a “natural” phenomenon that blankets rural America like summer heat. It is not just generated in fabulation, a narrating of the world, as is Stewart's focus. But, like formaldehyde off-gassing from engineered wood, it emerges from encounters with the materiality of the FEMA trailer. The FEMA trailer is a domestic form that is charged by short circuits, deterioration, and chemical off-gassing. As Kathleen Stewart (1996) found in rural Appalachia, suspicions often in-fill these rifts in the ordinary, where the norms of expectation are chronically subverted.

The home colors its inhabitants' reality (Carsten & Hugh-Jones 1995; Cieraad 2006; Miller 2001). As philosopher Gaston Bachelard maintains, the home “constitutes a body of images that give mankind proofs or illusions of stability” (Bachelard 1994 [1958]: 17), and can be read as “the metaphysically summarized

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juxtapositions of things, histories, and peoples.

situation of man in the world” (ibid: 28). Bachelard’s musings on the home are idealized and extend his European bourgeois perspective out to universal proportions. Interestingly, the anthropological record follows suit and provides very little room for discordant relationships between homes and inhabitants (Carsten & Hugh-Jones 1995; Gell 1998). Yael Navaro-Yashin finds it suspect that “anthropological renderings of houses, inspired by the study of non-European contexts, should be so similar to Bachelard’s Europeanist representation of household phenomenology as an unproblematic union between a person and his dwelling” (2012: 190). While perhaps romanticized, rosy accounts of the interplay between housing and the housed can be inverted to unpack situations in which such relations are marked by dysfunction.

As the ostensibly protective structure begins to inflict harm and the home is revealed to be a seat of harm, reality, stability, and the metaphysical situation of the inhabitant also begins to warp and distort. If the archetypal house “protects the dreamer, the house allows one to dream in peace” (Bachelard 1994 [1958]: 6), then the exposing homes of this thesis afford a particular genre of dream that waver between bizarre and nightmarish. Nightmares were themselves one of the most common symptoms associated with living in resold FEMA trailers. Increases in nightmare frequency and intensity were experienced by one in four of those that I spoke with.

Much of the surreality of the chapter unfolds out of fantasies of domesticity that have run out of steam. The lives documented herein are not simply ongoing performances of a hollowed life, like a Don DeLillo novel, but practices of home-buying and home-making that outstrip the physical affordances of the home. This chapter continues by first focusing on the logics that undergird the government’s resale of these housing units. Then, by way of a string of encounters, the chapter

opens up into an ethnographic analysis of the larger dreamworlds that pervade mobile homes in the United States. The surreality in this chapter is twofold. It is both an observed struggle with the material constitution of domestic life and a technique of ethnographic description that intensifies life into a series of juxtaposed happenings.

### **The Treachery of Warnings**

In Australia, nearly 60 percent of the roughly 165,700 indigenous households reside in public housing. Aboriginal communities inhabit these state-provided structures en masse, yet, as anthropologist Tess Lea and architect Paul Pholeros (2010) demonstrate, the dwellings fall functionally short of what can be called a ‘house.’ Electrical outlets are present but not properly wired. Showerheads, not designed for poor water quality, rapidly clog. Plumbing running from toilets is not connected to septic tanks or sewage lines. Pipes simply end in sandy subterranean earth, sending fetid fluids back into the home. Or pipes are broken during construction and left obstructed. Or wastewater outlets slope upwards as they leave the house and gravity’s invisible hand keeps the effluent from departing.<sup>91</sup> For these provisional housing inhabitants, plumbing that works is nothing more than a pipe dream.

These pipes, Lea and Pholeros assert, are not actually pipes. These buildings do not amount to houses. Entities resembling houses and pipes are materially present, yet are functionality absent. In their argument, Lea and Pholeros take a page from the Belgian surrealist René Magritte. In his late 1920s painting entitled *La Trahison des Images (The Treachery of Images)*, Magritte depicts a wooden-bowled smoking pipe.

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<sup>91</sup> One study undertaken between 1999 and 2006, found that only 11% of indigenous provisional houses passed the Australian national standard assessment for electrical safety. A functioning shower was available in only 35% of houses, and in only 50% of houses was it possible to wash a child in a tub or bath. The facilities to store, prepare and cook meals were present in only 6% of houses (Torzillo et al. 2008: 9-10).

The caption “Ceci n'est pas une pipe” (This is not a pipe) runs along the bottom of the image. The caption disrupts the link between a non-functional representation of a pipe and a pipe that can be stuffed, kindled, and toked. Magritte’s playful interference zeros in on the ingrained surreality of our everyday attribution of the *idea* of a thing to objects that bare a visual likeness. This affinity occurs even if such objects are functionally remote from their referent.

Aboriginal communities can use the PVC pipes provided to them by the State to rid their toilets of excreta just as easily as Magritte could have sat down with his painting for a relaxing afternoon smoke. Yet the same “aesthetic logic” that ties a depiction of a pipe to its referent also yields satisfied bureaucrats, governmental housing inspectors, news media, and publics when they see ersatz indigenous housing (Lea & Pholeros 2010: 191). Pipe and pipe-like and house and house-like are undifferentiated by the cursory eye of government housing inspectors—representations and the represented hemorrhage into one another. The counterfeit home holds visual currency and are viewed as “jobs well done.”

Lea and Pholeros call for a “dirty literalism,” to interrupt these tacit aesthetic logics in the same fashion as Magritte’s caption. Such an approach would enable onlookers to read the presence of provisional housing as “an illusion when no system of institutionalized expectation is in place to connect the physical structure (house) and the range of functions it is assumed to be able to provide to the resident: safety, security, and health benefit” (ibid).

Despite patent similarities, Lea and Pholeros’ intervention into the aesthetic logics of indigenous housing is not easily transferable to the case of the FEMA trailer. When the state insists that their (potentially harmful) provisional housing is not in fact housing, the surrealist interruption is not in the hands of the critic but of the state

itself. Like Magritte's painted pipe, the FEMA trailers bare a warning. The caption of *La Trahison des Images*, which urged viewers not to be confused by Magritte's lifelike illustration, is arguably less surreal and more straightforward than the cautionary notices issued by the federal agencies responsible for deploying and reselling the FEMA trailers.

Warnings first began appearing on the FEMA trailers during their initial deployment. I met Mominem,<sup>92</sup> a former FEMA trailer resident, in the meeting room of his New Orleans based architecture firm in June of 2011. He recounted the bewilderment of receiving his first warning of potential bodily harm resulting from his FEMA trailer, "I'd been living in the trailer for *two years* and they [FEMA's contractors] came along [while I was out] putting new warning stickers on in three languages: English, Spanish and Vietnamese." We both laughed. In some ways laughter is the only logical response. The advisory notice was comically thorough in its inadequacy; using three languages to apprise trailer inhabitants of harmful chemical exposures over a year after FEMA unequivocally knew their emergency housing units were contaminated. Most inhabitants were already moving out. The temporal *raison d'être* of warnings, their ability to avert *impending* danger, had progressively decreased in potency while human bodies soaked up formaldehyde for over two years. All that was left was the state's vacant language of liability mitigation, available to salt the wounds of multiple tongues.

Living alone in his FEMA trailer while his wife remained evacuated in Atlanta, Mominem turned to blogging to pass his nights and process the bizarre happenings of post-Katrina New Orleans. His blog maintained a thread of playfulness despite the stress of living in a battered and broken city. He chalked up his light-

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<sup>92</sup> Mominem is the blogging pseudonym used by this architect. The phrase is a southern abbreviation of "mom and them," a matriarchal stand in for "family."

hearted air to “the absurdist situations that we’re in *all* the time.” Mominem believed the bizarreness of governmental interventions and their resulting bafflement was best received with a laugh. His experience was in excess of Agamben’s assertion that in crisis “the juridical order contained an essential fracture between the position of the norm and its application” (Agamben 2008: 31). On the experiential level, it was not that the rule of law and its application cracked, cleaved, or fractured in any clear or “essential” way that resulted in the expanded power of the sovereign. Juridical level analyses stating, “[a]fter Katrina, the state both enacted and denied the capability for total control and continued ordinary administrative procedures” (Sterett 2009: 87), overestimate state rationality and their control over the application (or non-application) of procedure and their vast army of contractors. On the ground all reference to rules, governing machinations, and regulatory cogs began to melt and distort like Dali clocks, decomposing into the arbitrary and the surreal.

In his blog, Mominem voices his bewilderment following FEMA’s disuse of over ten thousand mobile homes during post-disaster reconstruction efforts in 2006. These mobile homes were stored at the Municipal Airport in Hope, Arkansas.<sup>93</sup> The stock of homes outgrew the stable ground of unused tarmacs and taxiways and three-quarters of the units were stored on adjoining soybean fields (Neuman 2006). With rain the homes began to sink into the mud. Some bowed. Other units began to topple into each other, as they were parked as little as six inches apart. To stabilize the units, FEMA then spent 4.2 million dollars to cover the field in gravel. Simultaneously sixty percent of Louisiana’s trailer requests remained unfulfilled and one hundred Mississippi families remained in military style tents (Committee on Homeland Security and Governmental Affairs 2006: 6, 27).

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<sup>93</sup> At the time FEMA had over 22,000 mobile homes, modular homes, and travel trailers stored at 11 staging areas across the country (Committee on Homeland Security and Governmental Affairs 2006: 15).

Some 25 years prior to the mass purchase of these mobile homes, FEMA adopted a protocol that forbade the placement of mobile homes on areas designated as floodplains. The bureaucratic logic behind this policy was that mobile homes would not be able to be evacuated in the event of another hurricane and their emergency infrastructure would be destroyed. As virtually all of southern Louisiana is a floodplain, and FEMA refused to repeal their regulation, the units lay in wait.<sup>94</sup> They deployed smaller and more readily portable travel trailers in their place. Ironically, the travel trailers were installed, all across the Gulf Coast, in a way that stripped them of their ability to travel: they were jacked up on cinderblocks, tied down with metal straps, and connected to the local electrical and sewer systems. The thought of disengaging 100,000 travel trailers from their sedentary perches and evacuating them in the three or so days of hurricane lead-time, simultaneous to the rest of the regional withdraw, is a telling farce. As Mominem wrote in his blog in 2006, “FEMA as usual has come up with a completely dada series of rules regarding the placing and removal of trailers.”<sup>95</sup>

Tess Lea also observed similar “absurdist policy expressions” in aboriginal Australian communities in which “measures were differentially applied, haphazardly implemented, and the space between pronouncements and shifts on the ground remained great” (Lea 2012: 115). Drawing upon her ethnography of Australian bureaucrats, Lea asserts, “senior policy makers thrive on the emotional thrill of surfing crises” in a way that obscures the impracticality of recommended measures

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<sup>94</sup> It should be noted that while FEMA refused to rescind its floodplain placement policy, numerous safety regulations were waved in the transport of these mobile homes: neither pilot cars nor permits were required; drivers were permitted to pull the homes at night without filling out log books that would enforce a safe work to sleep ratio. FEMA was paying \$4.50 per mile to tow these mobile homes (Committee on Homeland Security and Governmental Affairs 2006: 25), which is double the normal price paid for such freight. These high wages and lax stipulations on the part of FEMA attracted many “fly-by-night” drivers with little mobile home towing experience (Gardner 2006).

<sup>95</sup> Post available at <http://fematrailer.blogspot.co.uk/2006/08/evacuating-fema-trailers.html>

(Lea 2012: 111; Lea 2008). This leads her to claim that the State is, counterintuitively, a seat of anarchy<sup>96</sup> and that these anarchic qualities are transmitted, not countered, by way of intervention.

Under such a regime of governance, it is unsurprising that the warnings affixed to the FEMA trailers by the General Service Administration (GSA) prior to their resale appeared to invite disregard. The caption on the FEMA trailers is *not* riveted into the siding or etched onto the tow hitch next to the various other identifying marks embossed there. Rather, it is an 11.5x3.75 inch bumper sticker placed on one of the windows and reads “NOT TO BE USED AS HOUSING.”<sup>97</sup> All traces of its existence can easily be removed with a sharp blade and a bit of spit. The less detail oriented simply rip them off, leaving behind a patch of grime-free glass outlined by a white ribbon of adhesive.



**Figure 4.2** Negative space left by a warning sticker removed from a FEMA trailer window in Arkansas.

Magritte, Lea, and Pholeros warn that pipe paintings or mock provisional homes are ontological imposters. They are mere simulations of their ostensible

<sup>96</sup> Lea defines anarchy as “that imagined space where state regulation is negated” (2012: 110).

<sup>97</sup> In *La Trahison des Images* Magritte’s words of warning spanned almost the entire length of the depicted pipe. Those adorning the FEMA trailers were proportionately one one-hundredth the size. The text that accompanies the image of the pipe is made of the same substance as the pipe, oil and canvas, and cannot be removed without seriously depreciating the painting.

referent. Conversely, the red on white stickers adhered to the FEMA trailers *dissimulate* their function. The warnings dissimulate that the trailers were designed to house families of four, or sometimes more, for extended periods. *NOT TO BE USED AS HOUSING*. The stickers attempt to, at least ephemerally, separate the immediate functional value of the trailers from their use. In line with an architectural norm that became paradigmatic in the US following the Second World War, one in which “the conditions of use are caught somewhere in between citizenship and consumption” (Cuppers 2013: 16), the stickers “configure the user” (Woolgar 1991) in a loose manner. As citizens, users were entitled to the, all be it fleeting, possibility of being warned. As consumers, future owners and resellers were not fully constrained by regulation in a way that would thwart their desires for cheap housing or profit.

The warning stickers were applied exclusively to a single window of each FEMA travel trailer and park model and were not applied to mobile homes. It is worth noting that glass is the trailer surface from which stickers of any kind can be most easily removed.<sup>98</sup> If the stickers themselves are performative gestures of the state’s stewardship, its command over the health of its citizenry, then the ease of their removal is periperformative (Sedgwick 2003: 68) of the state’s disavowal of responsibility. The rapid removal of these warnings, whipped off like Band-Aids, warps the authoritative performance of their application.<sup>99</sup> Of the approximately 1000

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<sup>98</sup> Stickers left by post-Katrina FEMA trailer maintenance contractors, such as 3D Disaster Services Inc, adhered to the *siding* of the trailers to indicate inspection dates often persist long after the “NOT TO BE USED AS HOUSING” stickers as they are much harder to cleanly remove, despite the placement of the former years before the later.

<sup>99</sup> The most permanent and immutable place to affix such a warning would be a note on the trailer’s title. Units that were so disfigured that they were sold as scrap were marked as such on their titles. Those that were not scrap and categorized as “usable”—but not usable as housing—bore no inscription of caution on their title. The physical state of the scrap units made their potential to be used as housing far more visually pronounced than the “usable” units. Yet, no warnings were made on the “usable” trailers’ titles that qualified their usability. In other words, the units that were at higher risk of being used as homes bore fewer and more temporary precautions than those with less risk. Further, the federal government was also not listed as an owner on the FEMA trailers’ titles. These absences reveal the noncommittal character of the government’s commanded split between architecture and use.

resold FEMA trailers that I encountered in the course of my research, less than fifty bore warning stickers.

In an analysis of the visual taken-for-granted regulations of the everyday, from street signs to forest fire advisories, Joe Hermer and Alan Hunt assert, “we are faced with such an array of injunctions, warnings, directions, and threats that the breaking or avoidance of regulation becomes expected and normal” (1996: 457). The contemporary landscape, littered with minute regulations, inclines individuals to take posted warnings and prohibitions with a grain of salt. Yet even critical analysts assume that these regulations-at-a-distance endure; they persist across time as “immutable” (Latour 1986: 21) and bear “a sense of permanence” (Hermer & Hunt 1996: 467). The shambolic nature of the FEMA trailer’s warning stickers is revealed in their impermanence. The stickers attempt to garner a permanent disclaimer of federal liability while only temporarily discourage their use as housing. The governance of seller liability trumps protection against user hazards.

At the General Service Administration (GSA) auctions more warnings surfaced at the contract-signing table. Purchasers of “usable” FEMA travel trailers and park models were required to sign sales certifications stating that the buyer is aware that the unit(s) they are purchasing “may contain formaldehyde” and that they agree to “hold the United States harmless and indemnify the United States from any or all debts, liabilities, judgments, costs, demands, suits, actions, or claims of any nature that may arise from or incident to the sale of this property its use or its final disposition.” While these documents *are* warnings in that they indicate the systematic harm that may result from selling these units, their cautionary element is secondary to their liability-reducing function. The sales certificates are a means of legally washing the government’s hands of these controversy-prone trailers.

Notices of potential formaldehyde presence are common practices for *all* trailers and mobile homes as such housing bears, on average, four-times as much indoor formaldehyde as conventional homes (CA OEHHA 2001). The GSA warnings do nothing to document the extent of chemical contamination. They do not indicate that the FEMA trailers were found to contain formaldehyde levels two to five times higher than the already elevated average manufactured home (CDC 2008). The specific risks of living in a FEMA trailer are dissolved within a systemic and ongoing risk of manufactured home dwelling that have been simmering since at least the 1980s. Potential harm is further black boxed and lumped together with the unlikely possibility that the trailers simply may not contain any formaldehyde at all—a point emphasized by resellers and contradicted by the chemical samples I collected.

The sale certificates included a mandate that subsequent buyers be informed that such units are not to be used as housing. This provision is not enforced. I directed informants who were sold FEMA trailers without being apprised of the potential danger of these units to file a complaint with the GSA's Inspector General. Approximately a month after filing their grievance they would receive a letter notifying them that an investigation would not be opened because, as one Tennessee woman summarized, "this problem didn't really have anything to do with their department." Cleaned hands.

The surreality of the FEMA trailers and their resale is a symptom of the economies of abandonment discussed in Chapter Three. Beyond the pattern of chaos, beyond Dadaist interventions, beyond the contested ontology of the FEMA trailer is a stolid, attorney-reviewed, bases-covered, disavowal of responsibility. The unsteady but liability-free ground of resold FEMA trailers is a defining experiential quality of these economies. In line with the US government's calculated exit from liability, this

is the last sustained analytical attention paid to the state in this dissertation. The state recedes from the scene as the trailers circulated throughout the country on the open market. With their sale, the chemical exposure equivocating that so flagrantly marked early governmental responses to formaldehyde in the FEMA trailers (see Chapter Two) was adopted by countless resellers trying to make a sale. The succeeding chapter will detail these economies and reseller practices. I now turn from discussing the baseline surreality of state and market to the lived fantasies and nightmares of FEMA trailers' re-inhabitation.

### **Numbers, Wires, Teeth**

After Hurricane Katrina flattened their home, FEMA provided Brooke and Ronnie Granger of Picayune Mississippi with a mobile home—the more spacious emergency housing units that were disallowed on Louisiana's floodplains. In 2008, Brooke, 53, and Ronnie, 63, lived off social security and retirement benefits and couldn't afford to move into a more permanent dwelling. Conveniently, FEMA offered to sell them their emergency housing unit for the tidy price of \$5. This was among the first wave of resold FEMA trailers. The proposed exchange came with the stipulation that the mobile home would be tested for formaldehyde and must register low enough to be deemed “safe” before the transaction could be finalized.

Records kept by the Grangers show FEMA's first formaldehyde test registered a result of 77 parts per billion (ppb). In February, closer to the sale date, FEMA came back and asked that all the windows and doors be opened for a re-test. “We're going to let it cool down. We want it aired out,” Ronnie was told over the phone. Complying, Brooke and Ronnie sat quietly in coats and gloves on the couch as the test was administered. Formaldehyde off-gassing is tightly correlated with

temperature and can be heavily diluted with uncharacteristic ventilation. Accordingly, the second test result was 17 ppb, low enough for the sale to proceed. In August of 2010 a third party tested their home with a 24-hour badge and found a formaldehyde concentration of 117 ppb. In October of 2011, I conducted a 1-hour formaldehyde test, which produced a result of 105.69 ppb.

Since moving into the trailer Brooke and Ronnie state that they have experienced a slew of health problems, ranging from eye, respiratory tract and skin irritation to Chronic Obstructive Pulmonary Disease (COPD). In the three-week interval between when I tested their trailer and called to report the findings, their black Cocker Spaniel died of kidney, liver, and bladder cancer. “Same as the other two before her,” Ronnie told me over the phone. In 2010 two pet birds died abruptly. Their vet states with conviction that formaldehyde caused the death of all five pets, yet admits he can’t prove it.



**Figure 4.3** The Gangers, near Picayune Mississippi, December 2011. Photo By Andy Cook.

I visited the Grangers twice. Each visit lasted for a period of a couple hours. Both times we sat on their bed, which was placed in the living room. The power in the master bedroom had long since ceased to function, as had the power in the bathroom and second bedroom. A master electrician said the whole house needed to be rewired and ran extension cords underneath the house as a stopgap remedy. The electricity in the living room comes and goes. Two outlets have spontaneously burst into flames and were replaced. One of the plugs that caught fire was situated below where they hung their family photos. The photos have since been moved to plastic tubs by the door. Many of their valuables sit in tubs by the door, Brooke explained to me. Some things she never unpacked, as she didn't want to be in the mobile home long. Other items she wanted to be able to quickly save in the event of a fire. She worried about fire constantly. Ronnie too, "We live in fear of fire everyday."

Brooke's dental health has deteriorated, "My teeth have been getting bad, just crumbling out of my mouth. This one [pointing to a lower left premolar] is gradually crumbling and breaking off. It's crumbling from the inside." Sitting cross-legged on their bed, she recounts, "[My dentists] can't say 'yes' and they can't say 'no' but they say that the formaldehyde is a very good possibility of a cause... and the way that it is happening, its not just rotting and falling out, its good teeth..."

While chemical assessments, representing the concentration of a known human carcinogen in their domestic air, fluctuated by a factor of 6.9, their symptoms remained resolutely consistent. Numbers, warped by the prerogatives of federal liability, belied the regularity and depths of their domestic harm. These exposures and governmental disavowal left them bracing against their shelter and expectant of future shocks emerging from a world beyond visibility and certainty.

## Stable Ground

On my second visit to the Grangers' home, a journalist and photographer accompanied me in the hopes of putting together a news story on their situation. On our way back to New Orleans we stopped by a sprawling field of almost indistinguishable FEMA trailers. Andy, the photographer, wanted a photo of the scene from an elevated viewpoint. I scurried up the back of a trailer to take the shot for him. As I lunged onto the roof, its corner gave way. The waterlogged plywood was like dough. There was no squeal of wood. No pop. I just sunk. A puff of mold spores and mycotoxins exited as I fell in. I had never been inside that particular trailer, but I had been in enough to know that if I fell to my right I would land on the top children's bunk. If I fell to the left I would tumble into the shower. Leaning right, I only fell up to my knee.

In suburban Texas, I tumbled out the door of another trailer and down the two-foot drop to the concrete after assuming the floor under the welcome mat was intact. It was rotted out. My teeth and, to some extent, my dignity, were saved by landing on a cooler that the trailer owner<sup>100</sup> had placed just outside the door and was using as a sink. The shoddy plastic tubing that constitutes the trailer's plumbing had blown.<sup>101</sup> For the past few months she had been washing her dishes in the cooler outside, spritzing them with a garden hose. She rushed to the door, looking down on me as I lay sprawled over the cooler. With urgency she asked, "Are you okay?!" I responded in the affirmative, nonplussed and relieved that I wasn't bleeding. "It gets me all the

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<sup>100</sup> The FEMA trailer residents that I spoke with at this park outside of Houston were the only that were unsure if outside air was safer than the air in their trailers. After wavering for a moment she finally decided that it was the trailer's air that was likely more of a threat and causing her attested eye irritation, difficulty in breathing, fatigue, insomnia, general weakness, and memory loss, "Shit I've lived here 52 years I'm used to the stink. I know these plants aren't good for your lungs and there are a lot of cancers out here."

<sup>101</sup> Even in the relatively higher end modular homes I visited, residents complained of the malfunction-prone use of tubing for pipes.

time,” she remarked and retreated back inside to where we had been watching *To Kill a Mocking Bird* on TV. Some pitfalls are so regular, so unavoidable, they are not even worth a warning.



**Figure 4.4** Washing dishes in Pasadena, Texas, November 2011.

The hazards of material disintegration and the undercutting of expectation that they generate are shock-absorbed by inhabitants that don't have the resources to resist them. This woman, in her early 50s, was the assistant to the pain-pill-addicted elderly widow who owned and ran their trailer park. Her only income was the 100 dollars a week paid to her by the park owner and the in kind payment of a free place to park her

trailer and free water utilities. She had no phone or car. Her recently divorced nephew, a 37-year-old welder, recently moved in and slept on a pallet on the floor. I only came to know this woman by recognizing her trailer as a FEMA unit after having been contacted by another FEMA trailer resident in her mobile home park. It is unlikely that she would have found the drive, time, and access to communication necessary to track me down on her own. Her situation was unique in that she had largely given in to the ordinary of the FEMA trailer. I was alone in feeling a sustained sense of the surreal, while she busily made do. A formaldehyde test conducted in her trailer yielded a result (105.69 ppb) above EPA and WHO recommended formaldehyde exposure limits (100 ppb, 81 ppb, respectively).

### **Short Circuits**

Jason, a single father in his mid-20s, lived in a resold FEMA travel trailer in rural Florida, installed behind his grandmother's house. He bought the trailer in early 2012 for around \$9,500 from a nearby man who had parked the unit on the side of the road, with a 'for sale' sign perched in its window. After poking around the trailer and finding everything in good working order, Jason asked the man why he was selling it. The man responded with a smile, "the Mrs. says I need to get rid of something'. It's either this or my boat, and I just can't part with the boat." A couple weeks after Jason purchased the trailer, he drove past the space on the side of the road where the transaction took place only to find an identical trailer with the same 'for sale' sign sitting in its window, "It seems like there is a new one out there every three days, now that I'm paying attention."

By this time he had already developed the baseline symptoms of eye and

respiratory track irritation, headaches, insomnia, and fatigue.<sup>102</sup> Gradually, his dreams became increasingly menacing. His nightmares abated in intensity only when he slept next-door at his grandparents' house. As he reported, "within one night they're a little less vivid, but within three days of sleeping at their place I can really feel the difference." When I last talked to Jason in June of 2012, he was back, staying with his grandparents. A wire somewhere deep inside the trailer had frayed or broken loose in such a way that the entire aluminum exterior of the trailer had become electrified. He couldn't open the door without a considerable shock. To demonstrate the phenomenon, Jason playfully grabbed a friend and then touched his finger to his nose, letting the current flow through him, and zapping his friend. After shared laughter and a friendly scuffle, he unplugged the trailer. The low din of its air conditioning unit dropped off. Without A/C the summer heat and humidity would be unbearable, but if he turned the electricity back on he couldn't get in or out without being slapped by a sudden jolt. He saved up for an electrician.

### **Rip Out the Walls**

Dorothy Keme lives with her Husband, Franklin, two of their grown children, one son-in-law, and six grand children in a FEMA mobile home in the Pacific Northwest. The majority of the grandchildren belong to daughters that live elsewhere. Dorothy explained, "Here on the reservation there are bad problems with drugs and alcohol. When *my* kids are good they will get *their* kids back." After their conventional home burnt down in 2011, Dorothy and Franklin, both working full time and sixty years old, withdrew their savings to buy the FEMA home for \$40,000, which had been donated to their Tribe. "We thought it would be a good deal," She

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<sup>102</sup> His son was carried to term in the trailer, and suffered an in-womb stroke at 8-months and has motor and verbal developmental difficulties. The child's mother was later killed in a traffic collision.



**Figure 4.5 FEMA mobile home settled into the Pine Ridge Reservation, January 2013. Photo by Gina Rae La Cerva.**

recounted in almost a whisper. After three months of habitation, all of the residents have developed persistent headaches. Two of the granddaughters began routinely bleeding from their noses. One grandson is regularly sent home from pre-school because of diarrhea, a symptom shared by a large minority of the household. Both Dorothy and Franklin’s sense of taste has dulled and they either douse food with excessive salt to draw out any flavor—Dorothy’s solution—or barely eat at all—Franklin’s solution.<sup>103</sup> “I was concerned when the issue of the formaldehyde in the

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<sup>103</sup> Based on multiple phone conversations between December 2011 to August 2012 their total symptoms included: eye irritation, tears, burning of eyes and respiratory tract, nose bleeds, difficulty in breathing / coughing, increased asthma attacks, new asthma diagnosis, fatigue, insomnia, diarrhea, changes in sense of taste, general weakness, memory loss (some existed previously), nausea, nightmares, and migraine headaches. The tribe’s environmental health specialist, who attested that they reported illness to his clinic, introduced me to this couple. He requested ten test kits from me and after they were delivered he stopped picking up my phone calls or returning my emails. I can only hypothesize that it was because of liability issues as the tribe sought to sell these units to others on the

trailers come out, but you know what? We have no where else to live... my husband has some plan to rip the walls out..." The destruction of the home is the only way they could imagine it as habitable.

### **Frenetic Space**

As with many of my rendezvous, I met Kathy, and her adopted daughter, Delilah, in a Wal-Mart parking lot. It was July of 2011 and we were in rural Indiana. Delilah was curled up asleep in the back of their gold minivan. Kathy riffled through documents. They both wore matching pink outfits. We had first spoken several months earlier, when Kathy left a desperate comment on an online news story featuring research I had undertaken in Nebraska. On August 11, 2008 she and her husband, Cody, signed a contract deed to buy a FEMA mobile home for \$27,000 on a 15-year contact at 12 percent interest. They were told that one of the documents they were signing along with the contract was a notice that the unit had tested clear of formaldehyde. This document turned out to be a notice of possible formaldehyde that, upon signing, indemnified the resellers from any future health consequences.

The home was placed on a small parcel of land—which they were also renting to own—near the Ohio River. The health of Kathy, 55, Cody, 51, and Delilah, 4, declined during their four-year tenure in the FEMA home.<sup>104</sup> Cody's colon cancer advanced, as did Kathy's kidney disease. Kathy began contracting bronchitis with regularity. Cody would routinely come down with pneumonia. Cody's blood-oxygen saturation decreased from 98% to 82% and he was placed on continuous oxygen supply via nasal cannula. Delilah developed intermittent nosebleeds, recurrent

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reservation. Franklin, a police officer, conducted a formaldehyde test with a kit I sent them but lost it before it could be sent to the lab for analysis.

<sup>104</sup> They moved out in late 2012. I first heard word of their move via email on 22 November 2012.

congestion and gastro-intestinal pain. They all suffered from headaches.<sup>105</sup> Delilah's room tested at 71ppb<sup>106</sup> and in June of 2006 her physician signed a document stating that she "should not be housed in a formaldehyde-laden residence."

After twenty minutes of tailing Kathy's minivan, I pulled up to their home, tucked into a slight recess by the side of a sleepy road. Delilah was now awake and excited to entertain. She spun around gleefully—with outstretched arms—in the back of the minivan, announcing, "This could be my new FEMA home." Upon her doctor's recommendation, Delilah was sleeping at a neighbor's house. Since leaving the FEMA unit she was feeling better and only developed "ghost pains" when she was in trouble. Knowing the routine she waited patiently out front while I went inside to meet Cody.

Almost immediately after crossing the threshold, a simmering frenetic energy erupted in Kathy, an urgent, almost feverish, accounting of home-wrought injury. She dug deep into the bottom of her bedroom closet, tossing lone shoes, old blankets, and children's toys out of the way. She beckoned me to join her in her burrow, and pointed out several patches of persistent black mold along the baseboard. "It wasn't here when we moved in. Its probably from the river," she speculated. Cody watched from his recliner—he spent both his waking and sleeping hours there—oxygen tank at his side. I noted a photograph of teenage Cody in uniform and crew cut, standing by an American flag. Raising my voice to be heard over the TV, I asked if he was a career military man. He wasn't. After his time in the armed services, he had joined the

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<sup>105</sup> I was shown limited medical records attesting to colon cancer and kidney disease, not enough to assess exacerbation in line with FEMA home in habitation. I witnessed Cody using his nasal cannula and he showed me surgical scars on his abdomen he attested were from colon cancer related surgery. I received emails from Kathy at all hours of the night and day, suggesting insomnia. I was shown health records of Delilah's doctor visits, including the one mentioned in the following sentence.

<sup>106</sup> In June of 2011, the Indiana Department of Health tested their mobile home for formaldehyde. It registered 150 ppb. As the A/C unit was broken at the time, and house was 92 degrees. The abnormally high interior temperature may, at least in part, explain the vast differences between these two readings.

Indiana State Police as a canine officer and trainer. “He trained Belgian Malinois. Trained ‘em for finding drugs and search and rescue,” Kathy hollered from the floor as she packed odds and ends back into the closet. “He could make them go to the bathroom on command,” she recalled with a touch of sadness. Cody affirmed with a small stoic nod. She marched across the house to get some bills ready for the post office as I sat down with Cody.



**Figure 4.6** Delilah playfully passing time outside her FEMA mobile home near Corydon, Indiana, July 2011.

At several points in the conversation, Cody became exasperated when discussing Delilah’s health and appeared to lose consciousness momentarily. His head would droop and his speech would pause, only to click back into gear, seemingly a sentence or two downstream of where he left off. His loss of somatic control juxtaposed to the image of Cody having complete control of not only his own body

but that of his canine partner was staggering. I was developing a headache.<sup>107</sup> When the A/C engaged the lights in the front room came on. “Oh it does that, we’re going to try to jerry-rig it,” Cody remarked as an aside. Kathy pulled me into to Delilah’s room and showed me where she hung the mail-order formaldehyde test. Later, a neighbor appeared in the doorway. Kathy shifted to the right, inserting herself in the space between him and me. She spoke quietly through her teeth to me, “Don’t say anything.” After a few long moments of being ignored, the man disappeared from the doorway and Kathy’s body language radiated relief. “He bought three of these FEMA homes and is trying to resell ‘em,” she explained, “we don’t want to have anything to do with him. He’s just trying to use our information.”



**Figure 4.7** Kathy pointing to where she hung her formaldehyde self test near Corydon, IN, July 2011.

The atmosphere was charged with suspicions of duplicity, excited by the false assurances of the “crooked” resellers and walls that expose as opposed to protect.

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<sup>107</sup> Outside of my time spent in homes with suspected chemical exposures I never get headaches.

Deceit became a background noise of the domestic and the familiar was suffused with suspicion. Her attention was “loosened from any certain prefabricated knowledge of its object.” (Stewart 2005: 1015). Everything seemed to harbor the potential for, as Kathy put it, “trickery.” Many FEMA home inhabitants, including Kathy, developed insomnia and got as little as two hours of sleep a night. This weariness only added to the second-guessing. Misgivings of everyday materials and people accrued on top of the American cultural practice of what Kathleen Stewart refers to as “scanning,” a form of hypervigilance in which people “give shape to their everyday by mining it for something different or special” (Stewart 2007: 39). While the practice of “scanning” may lean towards the neuroses of obsessive compulsives, the lens of otherness with which Kathy and many other FEMA trailer residents read the world is defensive. It is not hopeful that this disposition will discover “something different” to inflect their lives with meaning, rather this genre of scanning hopes to apprehend and deflect the interruption of otherness into their lives. It is a precautionary acclimatization to inchoate domestic wounding.

In the fall of 2012, Kathy and Cody secured a Veterans Affairs grant and bought a conventional home on five acres of land, nestled in the woods. Kathy refers to it as her “dream home.” While still wracked by chronic pulmonary issues, Kathy remained pleased with their move. She described the home to me in an email, “it is in a clearing in the woods, [...] a herd of turkeys were just in the back yard. It is a house not a mobile home. Cody now is only on oxygen at night instead of 24-7. That proves it was the mobile home.”<sup>108</sup>

### **Slanting Towards the Present**

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<sup>108</sup> Email from Kathy to the author, 22 November 2012.

The afflictions of most FEMA trailer inhabitants do not fit into the boxes of specific diseases. Even the nebulous and stigmatized term of “sick building syndrome” is occupational in origin and focus, principally relies on the synchronous exposure of large numbers of people, and is functionally beyond the remit of isolated domestic exposures.<sup>109</sup> My research participants did not once invoke sick building syndrome to make sense of their multiple ailments. Inhabitants found no accepted rubrics to encapsulate the multiplicity of ways their homes distorted their bodies and minds.

A man in Ohio sustained a “sick stuffy nose” and “throat problems” for the year and a half between moving into the FEMA trailer in 2010 and contacting me in July 2012. An Indiana woman’s primary complaints were “fuzzy thinking” and “aging fast...like fast speed” after moving into a FEMA trailer. A three-year-old in rural Oklahoma came to her mother with a small pool of blood in her hands, telling her stoically, “This came from my nose.” During their six-month stay in a FEMA trailer, nosebleeds afflicted her on two other occasions. Her mother recounted that she developed small red dots on the backs of her ears, was bruising more easily, and also walked through the world more clumsily—constantly toppling over.<sup>110</sup> Card stock boxes of over-the-counter diarrhea medicine lay strewn across the house of a retired nurse who lived just north of Dallas, Texas, in a trailer park populated entirely by FEMA mobile homes. During an afternoon I spent with her in April 2012, she noted that since moving in a year previous, she had developed a standard constellation of symptoms: eye irritation, difficulty breathing, fatigue, insomnia, general weakness,

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<sup>109</sup> *cf* the studies cited in EPA 1991 and Murphy 2006. Also, what Janet Ore (2011) refers to as “mobile home syndrome” was not an idiom known or summoned by my informants.

<sup>110</sup> Her symptoms abated after moving out. This woman’s husband had previously fathered a child with another woman. The mother of this boy attests that he also suffered from clumsiness, pinpoint bruising and rashes after visiting their trailer on weekends or for longer periods during the summer. The father began seizing nightly, had to quit his job making wheelbarrows, and is now almost immobile. I have seen photographs of the boy’s rashes and directly observed the stupor of the father in March 2012.

memory loss, nausea, and six months of congestion. Only upon my direct questioning did she realize that her diarrhea—now an unremarkable facet of her constitution—had begun when she moved in. What unites all these people is not just the chronicity of their ailments but their unshakability. As one newlywed and FEMA trailer inhabitant in Illinois summarized, “Nothing helps our symptoms and our problems are persistent.”

As attempts to directly treat the body failed, ill inhabitants increasingly came to view their physical constitution in relation to the form and composition of their trailer. With this connection, many took to altering their homes in the hopes of chemical respite and wellness. The most prevalent measure was simply keeping windows and doors open as often as possible in the hopes of diluting their indoor atmospheres with, presumably cleaner, outdoor air.<sup>111</sup> Moved by the exasperation of durative infirmity, many took more dramatic actions. An Ohio man cut his floor out and replaced it with household flooring. Others replaced or removed cabinetry and interior doors made of formaldehyde-rich fiberboard.<sup>112</sup> A divorced 49-year-old Oklahoma woman, Christa Perez, removed the trailer’s built-in furniture, composed of engineered wood, and replaced it with solid wood furniture. She coated the remaining exposed wood with a “formaldehyde free” polyurethane sealant to inhibit off-gassing. Leaking roofs were common; many tied the resulting dampness to increased black mold growth and higher indoor formaldehyde levels.<sup>113</sup> Christa’s roof appeared to retain more water than it repelled as she witnessed water “shoot out from

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<sup>111</sup> Even in the temperate climates of California, manual domestic ventilation is not a fully ingrained practice. Roughly one in three participants in a 2009 study did not use their windows or doors to ventilate their home during a 24-hour period of surveillance (Offermann 2009: 3). The study raised further concern that building codes, which allow domestic ventilation rate minimums to be met by simply installing openable windows, may be inadequate.

<sup>112</sup> The cabinetry and doors of post-post-Katrina FEMA emergency housing units are metal to minimize chemical off-gassing.

<sup>113</sup> The hydrophilic nature of formaldehyde resins has long been known to increase off-gassing in the presence of water (Bentz & Neville 1949).

behind the siding” when she walked on the trailer’s roof. “I didn’t know that was possible!” She exclaimed before replacing it.<sup>114</sup>

These home alterations never fully mitigated their illnesses. Residents perceived, little or, more often, no effect on their physical wellbeing. Tests conducted by Lawrence Berkeley National Laboratory on the four most common FEMA trailer models revealed the range of FEMA trailer components that emit formaldehyde. Formaldehyde seeped from bed decks, bench seats, cabinets, carpets, the ceiling, the sub-floor, seat cushions, walls, curtains, and interior doors. While there was great variability across models, walls and cabinets were the top contributors of formaldehyde to indoor air (Maddalena et al. 2008: 27-38). The omnipresence of components that leached formaldehyde made renovations somewhat futile—especially for the chemically sensitized who can react severely to lower level exposures.

Christa’s symptoms of eye irritation, burning of respiratory tract, new asthma diagnosis, fatigue, insomnia, general weakness, memory loss, and nightmares did not go away after she altered her trailer. She moved into her FEMA home after quitting truck driving, taking up a part time job at a charity, enrolling in community college, and needing to reduce her overhead. During long homework sessions she took breaks by going onto Craigslist and flagging ads selling FEMA trailers. “It clears my head,” she told me with a smirk. Since moving in, one of her cats began coughing and her Chihuahua developed skin allergies. “I worry about my pets,” She told me during my three-day visit to Oklahoma City, “I leave and they don’t. I leave the door open when I’m here and the air gets better but when I’m at work or class I have to seal it up.” Christa fretted about the inexpressible ills of her animal companions and the potential

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<sup>114</sup> It should also be noted that a minority, largely composed of younger inhabitants with parental safety nets, simply gave up their FEMA trailer life. The Oklahoma couple with the nose-bleeding daughter moved back in with the husband’s parents.

future effects of the prolonged exposures they endured while she was at work or college. She was also the only resold FEMA trailer resident that was vocally apprehensive about her own future health. “I am worried about the long-term damage that it could have on me as a human being. It’s pretty unknown,” she told me over the phone, several months before I was able to meet her in person.



**Figure 4.8 Christa's home and (mostly repaired) vehicle, Oklahoma City, Oklahoma, March 2012. Photos by Akasha Rabut.**

Between our phone conversations and when I visited Oklahoma, a semi-truck ran a stop sign and struck her car. Both Christa and her daughter, who is grown and lives on her own, sustained substantial back injuries. Her concern with speculative chemical injuries were cut short, severed by the sharp pain of her spinal fractures and further diluted by the affects of prescribed pharmaceuticals. As she joked to me over

email, “Time doesn't matter much when you're on pain pills and muscle relaxers. LOL.”

Only four other informants expressed apprehensions about the long-term effects of domestic exposures, and they directed such concern exclusively towards their children. Three of the four used their FEMA trailers recreationally on weekends—one each in Georgia, Louisiana, and West Virginia. The other was a FEMA mobile home resident in Alabama. As stated in Chapter 3 with regard to the original FEMA trailer inhabitants, the orientation of the chemically afflicted subject is the present perfect. Just as hope in legal justice or financial redress was not a fully rendered figure in the lives of post-hurricane FEMA trailer inhabitants, neither is long-term risk a fully rendered figure for those that came to inhabit resold FEMA trailers.<sup>115</sup> The suffering of durative chemical exposures and defective domestic infrastructure conjures not a forward-looking weariness to coming interruptions but suspicion of an ongoing present, studded with both unexpected dysfunction and nearly habitual enervation. The ordinary of FEMA trailer life is warped, slanting one's orientation towards the immediate. This is not merely because of the phenomenological in-turning of one's perceptual radar when in pain (as discussed in Chapter 1), as attention is split between the internal and external abnormalities of the FEMA trailer's surreality.

## **Fallen Dreamworlds**

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<sup>115</sup> This may indicate that concern over long-term effects of chemical exposure is correlated with class as those using FEMA trailers recreationally were at a significant financial advantage compared to those using them as primary residences. Additionally, few recreational users contacted me, the majority of which were interested in long-term effects. This may also suggest that the totalizing language of “risk societies” (Beck 1992) overextends middle class preoccupations onto the population at large.

This final section unpacks the fantasies of domesticity latent in the mobile home economy. The movement here is back in time from the trailers as a current catalyst of corrosiveness and apprehension to a prior idealized conception of the mobile home. I trace how the chemistry of engineered woods, which revolves around formaldehyde, is woven into the recent history of homeownership in general and mobile homeownership more specifically. Once touted as the ultimate form of housing democratization, the lofty mid-20th century rhetoric of mobile living has diminished to the practicalities of cost-effective housing. Indeed, the FEMA trailer can be read as part of a larger decline of the popular dreamworlds both invested into and emerging from the figure of mobile home.<sup>116</sup>

In the spring of 2011, on one of my many trips to Texas, I visited a trailer park twenty minutes outside Houston's perimeter highway. Before setting out on the trip I had mined a one hundred and fifty thousand line spreadsheet for resellers along my planned route. From this list, acquired by way of a Freedom of Information Act request, I came to know that this trailer park had acquired just under 100 FEMA trailers, a quarter of which were designated as scrap. This represented mid-to small-scale reselling, yet still involved upfront costs of over \$215,000.<sup>117</sup>

When I arrived, there was some roadwork underway on the nearby highway and the air was inked with the smell of asphalt. Most of the trailers of the small, perhaps five-acre, trailer park bore deep grime. Dirt mixed with green mildew edged up the sides of their trailers. The park consisted of two lots—one with the office, a remodeled modular home, fitted with a generous deck out front. The other lot was dedicated to reselling used mobile homes and trailers.

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<sup>116</sup> The following chapter will then detail the larger national economies that facilitate the attenuation of mid-20<sup>th</sup> century conceptions of the good life.

<sup>117</sup> Numbers here are kept approximate to protect reseller identities from discovery by using these same public records.

As I walked in, a larger woman in her late 30s with tight blond curls and carefully painted on eyebrows asked from across the room, "can I help you?" I got my voice together and did my spiel. She looked concerned, at first, then pointed me to the back office of the owners, Tina and Darryl. I stumbled, momentarily, on a crumpled toy stethoscope engrained into the shag carpet as I entered their faux wood paneled office.

Behind a large desk Tina sat with the posture of a mom—strong but not wasting energy on elegance—filling out contracts, barking out orders to the front office and a roving handyman. Even while she talked to me, she was listening to the conversations in the front room and from time to time, would intervene with non-nonsense assertiveness.

Darryl came in as we were talking through the consent form. They both perked up at my mention of formaldehyde in the form. Darryl dove straight in, "We have always had to deal with formaldehyde issues in the mobile home business. This is nothing new. I always have people sign a formaldehyde release before they buy or move in." Darryl was crouching next to the desk. He kneeled with one hand holding the desk, suspended in pensive thought before continuing, "Everybody knows that they have formaldehyde in 'em. They don't just spray it in there. They put it in as a preservative."

"It isn't the formaldehyde that made them sick," Tina chimes in, "When we drove into Louisiana [after Katrina], we just got stuffed up. It was like a wall of mold and allergens when we drove in. I would be sick too if I lived there. The trailer was protection from that, if anything. They got sick from their environment... not their home." While formaldehyde is always an issue, always warranting a legal release, formaldehyde is not a cause of illness. The paradox hung heavily in the air, one that I

encountered time and time again when speaking with resellers or park owners.

After several heated minutes of back and forth that wasn't moving anywhere, I looked for a way out. I asked if residues of their previous use in catastrophe negatively effected their current value. "Having had those people in Louisiana<sup>118</sup> in there before doesn't matter now. I've had mobile homes that people have died in, ones where some guy blew his brains out. That is just part of the business," Darryl answered frankly, running his hand down his cheek to his chin slow enough that the rasp of each follicle of stubble as it passed under his hands was almost audibly distinct. "Once he bought one [a mobile home] from a repo auction that ended up having a body in it," Tina goaded. Darryl blushed and turns his eyes toward the carpet, his gaze hovering over a plastic toy stethoscope that had tripped me up earlier, as I entered the room.

Tina kept the conversation going, distracting from Darryl's palpable discomfort, "There were some that had voodoo in them. Those Louisiana people had smeared ashes over the door to protect them from evils." Looking back up, Darryl interjected, "there were bamboo crosses and all that." No one would bid on those lots. One of their sons, in his red and white little league uniform, slinked into the office and climbed into his mother's lap without saying a word. His mouth hung open slightly as he silently stared across the desk at me, unflinching to my playful faces. Darryl looked at his son, then up at the clock, and with a jolt, hopped up from the crouch he had held for nearly an hour, "Okay we need to head out to his game."

As we walked out together, I asked him how he got started in the trailer business. With a prideful grin and a mysterious, "let me show you something," he lead me to the front office and a small collection of black and white photographs from the

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<sup>118</sup> In Texas, many of those that I talked to used the term "Louisiana people" to mean black people.

1950s, featuring a high-end mobile home. "My grandmother was Mrs. mobile home in Florida in 1952," he proudly related, gesturing to a yellowing newspaper clipping. "My grandparents designed the first mobile home in Florida, 'The Futuro.' It was all custom. Here ya got: them, cousins, and the investors. Mobile homes are in my blood." Flush with vigor and pride, he recounted the particulars of each shot, the model's features, and every one of his depicted relations. An antithetical disposition to that of his earlier explanations, full of backpedaling, grimaces, and sighs. Times were no doubt hard. The FEMA trailers sold well but they were ensnared in a lawsuit with a former tenant over some maintenance issues. He was selling and renting barebones homes to desperate folks barely staying afloat, not those playing out their dreams of mobility and luxury. After a brief wistful pause, he rushed out, playfully pushing his son out the door.



**Figure 4.9 Photographs of the Futuro in a trailer park outside Houston.**

I stood in their front office, staring at the collection of images. Beaming men proudly standing by the first Futuro off the line. Airy shots of the mobile home's interior: ample seating; some fixtures built in for mobile efficiency, convenience, and

sturdiness; freely moveable stools, chairs, and end tables lent the feeling of a conventional home. An illustration of the Futuro hovering in a white abstract landscape, replete with design flourishes similar to the more expensive automobiles of the day. A series of gill-like windows encircle the home lending it resemblance to spacecraft. And finally, the centerpiece of the constellation: the Futuro in situ on a secluded beach, palm fronds leaning into the frame from the right.

As I stood in the reception area, regarding what was nothing less than a shrine to the Futuro, I could not help but recollect another tantalizing structure, which I had only seen in similarly alluring depictions. Advances in iron forging and glass production facilitated the construction of miles of arcades in mid-19<sup>th</sup> century Paris. Arcades consisted of passageways embraced by long iron archways and protected from the elements, and naturally lit, by large glass plates. Lined with boutiques, arcades layered an expansion of what was technically and materially possible on top of avenues of upscale commerce. Walter Benjamin saw this nexus of capitalism, technology, and visual splendor as the epitome of a modern “reactivation of mythic forces” (Benjamin 2003: 391). He posited that a magical surreality enshrouds what Max Weber asserted as an increasingly rationalized and disenchanting Western world (Weber 1989 [1922]: 30). Benjamin’s arguments of latent material-capitalistic dreamworlds do not countervail Weber’s assertions of strict rationality’s ascendancy, they only seek to crystallize the vaporous fantasies that lie under the surface and proliferate out of large technological projects (Buck-Morss 1991: 254; also Jenkins 2000: 13).

Today, architectural historians continue to uphold the central importance of iron forging, as Robert Kronenburg maintains, “The single great technical innovation to take place in building before the twentieth century was the invention of cast

wrought iron” (Kronenburg 2002: 45). What is not addressed in the literature is how subsequent construction technologies have maintained or modified the technological enchantment of the built environment in the intervening 160 years. I hazard the assertion: if iron in the form of arcades fueled the commercial dreamworlds of the mid-19<sup>th</sup> century, engineered woods supplied the tinder for the combined commercial and domestic fantasies of the mid-20<sup>th</sup> century US. These relatively inexpensive woods subsidized a post-war spike in home construction and ownership, helping to bring technological wonderment home. While the influence of pressed woods is extensive across America, nowhere is it used in as high of a concentration as in the mobile home. Engineered wood is the unsung cornerstone of the mobile home, which, as public affairs scholar Allan Wallis states, “may well be the single most significant and unique housing innovation in twentieth century America” (Wallis 1997: V).

The make-believe cooking of microwaves. The convenience instant coffee, tang, or canned mash potatoes. The aesthetic fantasia of Jell-O salads and the upsurge of domestic appliance consumption (*cf* Shapiro 2005). All of these fanciful realities of the 1950s domesticity were given life by record rates of homeownership, due to massive increases in domestic housing stock; houses thrown together rapidly, with a heavy and growing reliance on plywood and particleboard. Benjamin concisely summarizes the connection between the material constituents of the built environment and dreamworlds, “Construction plays the role of the subconscious” (Benjamin 2003: 16). The built environment plays a foundational role in the generation and maintenance of dreamworlds—both the public spectacle of the arcades and private contentment of the manufactured home.

From the late 1940s until the economic downturn of the 1970s, home construction and plywood production increased by leaps and bounds. Fifteen million

homes were built during the 1950's, enabling, as architectural historian Janet Ore notes, "an unprecedented 60 percent of Americans to be homeowners" (Ore 2011: 269). As post-war demand fueled a housing explosion, the square footage of structural plywood incorporated into the average home more than quintupled from 1950 (1,707) to 1992 (9,668) (ibid: 270).

Nowhere were engineered woods more prevalent, and sales increasing faster, than with the mobile home. The mobile home represented both the ultimate industrialization of home construction and, through its affordability, democratization of home ownership (Ore 2011: 273-277). While perhaps on the higher end of the market spectrum, the Futuro epitomized the mid-Century dreamworlds—of technological optimism, and liberation through consumption (Cohen 2003)—that brought the mobile home market from obscurity to a conspicuous figure of the rural and suburban landscape.

The receptionist punctured my reverie. "Ya know, those Louisiana people bought Cadillacs with their FEMA money," she called out from across the room, with a hint of venom. The phantasmagoria of the Futuro sputtered to a halt. I returned from the nostalgic futurism of the photos to where I stood on a shag carpet that resembled a dog's coat after a day at the beach. To the mildewing shelters of last resort that they rented out to the down on their luck or the newly evicted. To a manufactured interior space where nothing is custom-built like the Futuro. To the news story about Daryl buying a mobile home with a dead body in it, which hung discretely in a back corner. To the grounded dream of the mobile home.

"Cadillacs got formaldehyde in 'em too, why couldn't that be what's making 'em sick?" she continued, pursing her lips and raising her painted on eyebrows when I turned to look at her. "Well," I thought out loud, "You don't live in your car—I mean,

you don't spend as much time in it... It's easier to ventilate... um, there is probably less formaldehyde in it because there are no engineered woods in 'em... and how many people *really* bought new Cadys with their FEMA money?" She waggled her head disapprovingly at my answer and turned to her paperwork. A gust of asphalt-singed air blew into the room as a Latina woman pushed open the front door, a baby slumbering on her breast. "Do you have anything I can move into today?" She asked in a thick Hispanic accent as I left, pushed out by the receptionist's eyes.

### **Conclusion: Life Out of Whack**

The two main currents of this chapter, the regulatory and the material, double back on each other locked in the reciprocal inadequacies of the FEMA trailers. Their legal configuration by the federal government as "non-housing" is partial and temporary. Yet, the trailers are not materially conducive to "housing." Inhabiting a FEMA trailer is to dwell in a no man's land, a grey economy, "a nervous system of signs and agencies" (Stewart 1996: 56). Their price and architecture pulls people in, but life inside wears them down. It is in this gyre that FEMA trailer inhabitants often find their situation best summarized as "out of whack." This domestic surreality permeates both the illocality of the first chapter and the "chemical sublime" of the final, chapter.

The surreal of this chapter does not infer an *a priori* reality. The surreal is defined relationally to norms. An expectation that a home does not itself inflict harm, is likely not only held by my informants, but is also the socialized assumption of the reader. In this way the "bizarreness" of the happenings detailed in this chapter do not fit neatly within ethnography's standard juxtapositional framework, as explained by Strathern, "The effect of the observer/observed dichotomy has been to create a sense

of alienness or otherness, introducing the reader to the bizarre and simultaneously overcoming it by locating what “we” see as bizarre within a context where for “them” it is familiar and ordinary” (Strathern 1987: 259). This chapter does not seek to “overcome” the bizarre but to first highlight how the state deploys bizarreness as a method of governance and second, to highlight the bizarreness of the FEMA trailers as a sense of otherness that is largely experienced by both “we” and “them.” The surreal is the irritating background noise of ordinary life in the FEMA trailers, but a background noise that is palpably maddening. For most, the electrical short-circuits, unstable ground, and miasmatic air of these homes are not fully lodged in the familiar. These phenomena are in the process of becoming ordinary, and trailer inhabitants are in the process of becoming estranged from a domestic ordinary Western society has come to expect (see Chapter 1). Some acquiesce into accepting domestic pitfalls, such as the woman in Texas with the rotted out floor, but most struggled to resist the seeping of malfunction into their routines. The surreal is a transitional period between ordinaries, and like the transitional nature of the FEMA trailers, the surreal of the case at hand is indefinitely moored.

Foucault argues in an essay entitled “A Swimmer Between Two Worlds” that surrealism’s frontman, André Breton, was not a “poet of unreason” but a “writer of knowledge” (Foucault 2000: 172). In agreement with Foucault, this chapter invokes the surreal as the domain of existence between the two intimately entangled worlds: one of dreams, expectations, and regulations, the other of disintegrating materiality. While a juxtaposing of vignettes lies at the heart of the chapter—employing traditional ethnographic surrealist techniques—the contribution of this chapter is the empirical documentation of the surrealism emergent in the everyday. “Everyday madness” is not just the construction of “profane illuminations” by the ethnographer

(*cf* Bate 2007) but, but for some, a foundational quality of reality itself.



## CHAPTER 5

### Dispossession by Distribution

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I am convinced that the trailer or an improved version of it is, for better or for worse, the low cost dwelling of the future—lacking in solidity, lacking in charm, but inexpensive, convenient and mobile.

—JB Jackson (2000: 222)

Waiting for my host to get home from work, I meandered the mile or two down to the river. I had arrived in Little Rock in mid-afternoon after an early start in New Orleans and a failed attempt at interviewing a FEMA trailer reseller in rural Arkansas. It was an elegant refusal, ending with the RV dealer offering me a bottle of water, as I probably looked delirious. I had hit the road at 5am and spent 8 hours slowly roasting on the black leather seats of my air conditioner-less car.

Exhausted, I plopped myself down on a thin strip of grass atop the embankment and in the shadow of the bridge. The Arkansas River lolled by. A shirtless old man floated into view on his blue aluminum dinghy. He stood over the prow with his fishing line draping into the opaque water, his boat slowly spiraling in the current. Within a minute I was asleep. A book I had over-ambitiously brought along served as a pillow.

“I haven't seen you around...” I woke up. “Are you a musician?” I blinked my eyes to find a sheepish brown-haired boy standing over me, fidgeting with his lip ring. He couldn't be more than five years younger than me. Puzzled by both the question and his bashful confidence, I looked around to get my bearings. Almost directly above me long folding tables had been erected. The local “Food Not Bombs” chapter was handing out food to the homeless. The gentle implication of his question—that I was a homeless traveler—clicked into focus. I sat up, arranged my water bottle and book just so, and clarified my situation.

After a few minutes of chatting he wanted to introduce me to the woman who had been looking after him since he left home at sixteen and who orchestrates the soup kitchen that had sprung up around me. We walked over to a woman with wispy blond hair and a handsome weathered face. She stood talking with one of the soup kitchen's regulars, who lived in the local shelter where she also worked. She asked me about my research. I explained it as best I could and she nodded along with more direct interest than I had anticipated.

"Oh, well you can help us then," she responded, "We are looking into buying some FEMA trailers for the shelter I work with. We heard you can get 'em dirt cheap."

"I didn't know FEMA trailers were a trending topic!" the young man exclaimed, looking up from his phone. Still waking up, I staggered under the dilemma unfolding in front of me: housing or health risk.

"We have more guys than we can put up right now. We have some of 'em in borrowed tents," she continued. In introducing my work I had mentioned the potentially toxic exposure and the illegality of their resale as housing. "They would also be good to give 'em more privacy and a sense of independence. We heard a little bit about the chemical thing, but it's all gone now since it's been so long since they were made, right?" I was speechless. She filled the empty conversational space, and leaned in with a friendly smile, "Where would you recommend we get some?" This was the early spring of 2011 and the first day of what would be a yearlong series of trailer tracking road trips.

This would not be the last time I would encounter the proposed use of these trailers as housing for the homeless. Some six months later I would hear an environmental specialist on a reservation in the American West mention that there

was talk of turning three former FEMA mobile homes, donated to the tribe, into homeless shelters. This first day would echo throughout the rest of my fieldwork, as I would slowly come to understand that the trailers were being pulled towards vulnerable and abject populations, populations in which the primacy of a solid roof overhead outweighed risks of future illness.

In the course of my research I found FEMA trailers to accumulate at the poles of an unstable economy. These potentially toxic homes gravitated to spaces with overabundant, erupting capital—oil fields or oil spills, for instance—and spaces with capital droughts such as post-industrial small towns and Native American reservations. Both those directly extracting capital and those excluded by capital are exposed to the domestic dangers of these housing units. In this chapter I show how FEMA trailers link capital and housing crises to the health, meaning, and materiality crises of the previous chapter. In line with Povinelli's reminder that "the biopolitical is a spacing rather than a space" (Povinelli 2011: 128), the crux of the chapter revolves around the arrangements of FEMA trailer markets and consumers to bring into relief the regime of biopolitics at play in 'other' America (Stewart 1996). The pivot between the previous chapter and this chapter is a move from the space of the home to the form of trailer dispersal.

In trying to understand what is revealed by the geography of FEMA trailer distribution, the volatility of capitalism must be understood in terms of both emergent crises that appear to be a sign of the times—such as the foreclosure crisis—and longer-term crises that manifest below mainstream perceptual radar—such as the rural lumpenproletariat. Regardless of whether one is caught up in epidemic or endemic predicaments, a sense of precarity is common to those that occupy the trailers and, often, their adjacent environs. Following sociologist Maurizio Lazzarato and others,

my invocation of precarity signifies a “general existential state, understood at once as a source of ‘political subjection, of economic exploitation and of opportunities to be grasped’” (Lazzarato 2004 as cited in Neilson and Rossiter 2008: 52). A number of scholars have argued that precarity has increased in prevalence in post-Fordist economies and is a distinctive feature of neoliberal life (Alison 2009, Neilson and Rossiter 2008, Berlant 2007, Hart and Negri 2004).<sup>119</sup>

The mobile home has long been a refuge for those facing precarity, accommodating itinerant laborers, new families, and the retired. Trailers have also provided shelter for more general populations during national housing crises. In this respect the homing pigeon-like travel of the FEMA trailers to those confronted by insecurities is not unexpected. Indeed, as Hart et al. note of mobile homes in the United States, “at the local level the distribution of [all] mobile homes and mobile home trailer parks is idiosyncratic. At the national level we can hazard some reasonably good explanations of why mobile homes are the way they are” (Hart et al. 2002: 37). In addition to detailing the form of the FEMA trailers’ resale, I also document their primary mechanism of conveyance: the all-too-often-overlooked domestic dimensions of what David Harvey refers to as “accumulation by dispossession” (Harvey 2005). As has been noted of “infrastructural violence” in urban settings, these trailers form a rural landscape that “not only reflect but also reinforce social orders, thereby becoming a contributing factor to reoccurring forms of harm” (Rodgers & O’Neill 2012: 403). The trailers are both indicators and agents of dispossession and precarity.

The FEMA trailers take many forms in this and the previous chapter: an opportunity for profit—both real and imagined—, a ‘lesser evil’ for those facing

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<sup>119</sup> In accord with my analysis of the cultural veracity of the term “refugee” for those with no private place of their own (see Chapter 1), Anne Alison notes that the young deterritorialized flexible work force in Japan feels “refugeed” by their economic insecurity and social negation (Alison 2009).

homelessness, and a spectacle of capitalism. The perspectives of FEMA trailer resellers make up much of the chapter and cast a somewhat bullish, if not opportunistic, view of the trailers. Where the story begins is not with the capitalistic glee of resellers but with the dread of the mobile home manufacturing industry. This chapter outlines the way a surfeit of FEMA trailers was a capital crisis for the mobile home market and how this market crisis was distributed across a variety of housing crises, and ultimately settled in family-level crises of health and precarity.

While distribution is a process of concealment, of dismantling the liability of thousands and thousands of potentially toxic trailers, the destinations of their dispersal, analyzed in aggregate, illuminates the geography of national housing and capital crises. Edward Soja has argued, drawing on John Berger, that, “revealing how spatial restructuring hides consequences from us is the key to making political and theoretical sense of the changing political economy of the contemporary world” (Soja 1989: 62). This chapter adds an analytics of spatial concealment to the analytics of uneventfulness developed in Chapter 3, where on-going exposures resisted the bound temporal form of the event.

## **Glut**

Before moving empirically forward, let us first circle back to the glut of FEMA trailers laying in wait from 2007 until 2010, where the movements and economies of this chapter begin. As outlined in the second Staging Area, RV manufacturers across the country looked to the FEMA trailers with a sense of foreboding. A sentiment that had gradually boiled up and subsumed the contentment of their post-Katrina earnings. Immediately after the storms, manufacturers and local dealerships could barely sate the federal government’s appetite for mobile housing

units. FEMA acquisition specialists bought up available local inventories and signed multimillion-dollar production contracts for the remainder of their housing needs. Some FEMA trailer factories were producing upwards of one hundred trailers a day in what seemed like an almost endless stream of profit (Majority Staff Analysis 2008: 10). But, for the manufacturers at least, the disaster was not a black hole market. The residential destruction of the Gulf Coast did not foster a market that would permanently absorb massive amounts of trailers.

Over the course of several years, trailer manufacturers' profitable post-disaster oasis dried up, and the trailers were to be coughed back up onto the market. RV manufactures fretted that the market would be flooded with reduced priced units, sending demand for similar full priced units into a tailspin. When 7.0-magnitude earthquake shook millions of Haitian homes to the ground in early 2010, the Recreational Vehicle Industry Association quickly attempted to lobby congress and court aid organizations in the hopes of sending over of 150,000 bargain-priced FEMA trailers to Haiti. While this *deus ex machina* Haitian emergency housing solution did not occur, the attempt is revealing and provides an analytic inroads into the spatial dimensions of crisis disassembly and redistribution.

This overaccumulation crisis that loomed large for RV manufacturers in 2010 is not an anomalous predicament. Accumulation is the "motor" of capitalism (Arendt 1968 [1951]: 28), it is both part and parcel of the unquenchable thirst of growth-based rubrics of success and the everyday processes of interest accrual, surplus-value extraction, and asset acquisition. But, as geographer David Harvey has observed, the drive to accumulate capital, the very essence of the system, perennially fuels production that outpaces consumption and results in market disequilibrium (Harvey 2005: 141). The dreams and nightmares of capitalism are locked together in the figure

of overproduction-begotten accumulations of capital. As Harvey explains, “the various manifestations of crisis in the capitalistic system [... can] be traced back to the basic tendency to overaccumulate” (Harvey 1975: 10). To avert or mitigate these crises a spatial fix is often sought by opening up new internal or external markets to absorb the glut (Harvey 1982: 417-419). Overaccumulations, Harvey tells us, are disassembled at the symptom level and spatially re-distributed, while the root causes of such market imbalances remain unchallenged. The proposal to send the FEMA trailers to Haiti was a last ditch attempt at seeking such a spatial fix, of avoiding the inevitable deprecations in demand due to overproduction. These crises don’t simply end or play out. They are moved.

## **Dispersal**

This effort to externalize the threat posed by the FEMA trailers failed and GSA auctions proceeded according to plan. Slowly, the trailers made inroads across the country. As the herds of FEMA trailers on staging areas across the south began to thin, the trailers ceased to be shepherded by the federal government. Whatever lobbying influence the RV Industry Association held over the destiny of the FEMA trailer stockpiles waned. The piecemeal machinations of the open market took over. Their compass became that of the rural investors’ speculations. A veritable gold rush ensued and entrepreneurs from every corner of the country—and a handful from Canada and Panama—flocked to GSA’s auctions.

The majority of trailers were snatched up 20,000 at a time for upwards of tens of millions of dollars. Auction houses like the Livingston Louisiana based Henderson Auctions invested over \$18 million into FEMA trailers. Others, like Greenlawn Homes of Columbus Ohio that paid \$27.5 million for just over 15,000 units, deployed

a battery of techniques for garnering profit.<sup>120</sup> Some of Greenlawn Homes' FEMA trailers were placed on mobile home parks they own, some were wholesaled, components of multiple less marketable and visibly distressed units were combined to a single trailer and retailed. Greenlawn Homes sold units to manufactured home dealers, mobile home park owners, and even auto-dealers trying to make use of idle space on their lot (Odendahl 2010). Most trailers would be resold three to five times before reaching their final residential destination. A few hundred or thousand dollars was added to the sticker price with each change of hands. As the trailers were hauled to far-flung locations such as California, New York, and New Mexico, transportation costs ticked prices even higher. In this fashion, the multi-million dollar arterial avenues of redistribution subdivided into more modest capillary circuits. In a pulse of activity that began in 2010, a hundred and fifty thousand FEMA trailers made their way from spectacular and worrying accumulations on staging areas to isolated and humdrum existences, perched on a mountainside in West Virginia, hauled onto a reservation in North Dakota, or planted in a highway-side RV park in Oklahoma.

The unleashing of the FEMA trailers onto the market surely did not aid the sagging mid-recession sales of new mobile and modular homes, but it also did not eviscerate the market as originally anticipated. Aaron Mortrud, the general manager at the aforementioned Greenlawn Homes contends that initial concerns of market depreciation were unfounded as new mobile or modular homes that cost in the vicinity of \$45,000 garner a completely different clientele than those seeking FEMA trailers, which often retail less than \$10,000. "At the street level, it's been a good thing," Mortrud told reporters in Indiana (Odendahl 2010). Indeed, those that are buying the FEMA trailers are not of the lower and moderate-income bracket that

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<sup>120</sup> The source of these numbers is spreadsheets given to me by the GSA as a result of several Freedom of Information Act requests.

comprise the standard consumer base of mobile homes but, by and large, a group of individuals that would be priced out of conventional options.

Living on unemployment, disability, or social security, having just been released from prison, going back to college, rebounding from a divorce or spouse death, picking up the pieces after a house fire, returning from war, engrained in a circuit of migrant labor, saving to get a leg up in the future, or simply having trouble scraping by—many former-FEMA trailer residents shared a precarity that put the financing of a mobile home out of reach. This swathe of society economists have only recently begun to view as an emergent class, one that began to coalesce in the 1970s, and dubbed “the precariat” as a particularly precarious rung of the proletariat (Standing 2011). This category acknowledges the yawning internal disparity of the traditional working class. The precariat is marked not only by incomes—the lowest of the working class—but by their intermittent or underemployment, or reliance on meager welfare payments, in a word, their insecurity. While only recently named as such, the underlying process of immiserating and hindering full inclusion of the subsistence sector into capitalist relations has long since been documented (de Janvry 1981).

It is the precariat that absorbed much of the over-accumulated FEMA trailers that had passively menaced the mobile home industry from their storage yards. Instead of externalizing the glut of housing units to Haiti, a “new” internal market opened up and gradually soaked up the product surplus. Resellers forged homeowners out of those traditionally priced out of standard models.<sup>121</sup> Indeed, there is a liberating aspect to the FEMA trailers’ resale as they lowered the entrance costs to entering the

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<sup>121</sup> Mobile home dwellers are more often than not priced out of conventional single-family homes. FEMA trailer residents are third class homeowners.

symbolic order of American homeownership, a core facet of the American dream (Perin 1980).

A thirty year-old man outside of Tucson Arizona, who lost his hearing in a tussle with cancer and as a result had trouble finding a job, was able to move out of his mother's crowded home. A disabled veteran, a retired prison guard, and their daughter were able to rent-to-own a FEMA unit and a small parcel of land overlooking a river in rural Indiana. After a fire destroyed their five-bedroom house, a couple nearing retirement on a reservation in Washington State was able to invest their savings into a FEMA mobile home to house themselves, two children, and six grandchildren. A retired school-bus driver from Appalachia and his ailing wife could afford to have a FEMA trailer in a trailer park in Florida to ride out the winter. A truck driver in Illinois parked her new home in front of her flood-destroyed house on the bank of the Mississippi, feeling reassured that she could wheel her home out of harms way during a future spring flood. A single father, a young couple, old farmers, Nevada, Tennessee, Colorado, Alabama, California—all people who would likely not own the roof over their head if not for the FEMA trailer.

Yet, as discussed in the previous chapter, the range of amenities a house is thought to provide (safety, security, and health benefit) do not always accompany the visual appearance of a home (Lea & Pholeros 2010). The beneficence of the FEMA trailer's resale to populations categorized by their vulnerability and precariousness turns inside out when the low-price housing is subsidized by their concealed health and wellbeing costs. As often sub-clinical but ongoing symptoms emerged, the positive market growth of the FEMA trailer market is revealed to be predation. New FEMA trailer residents slowly come to realize they did not get the deal that they

thought they were getting. Housing becomes dispossession. Shelter becomes exposure.

## **Economies**

On the whole, resellers felt content about their purchases. "We will probably buy some more," Daryl, introduced in the previous chapter, speculated with a satisfied nod, "We went to several of the auctions and bought 105 in total, some as cheap as 400 dollars. [...] We pooled our money together with a few different folks and we towed 'em back here five at a time. Its very good business." He has sold most of his FEMA stock and rents out the remaining units on a monthly basis in his adjacent mobile home park—a fairly standard practice.

Although he was happy about his business, Daryl knew that economies of scale were the name of the game and that those who can afford large investments were making much larger profits. He continued:

Warren Buffett [through Berkshire Hathaway's ownership of the mobile home manufacturer Clayton Homes<sup>122</sup>] made a pretty penny off FEMA. He sold a couple thousand modular homes for 30 grand across the board and then when FEMA couldn't use them because it was a flood plain he bought them all back up for about a quarter each. They are all brand new and are going to be resold again for probably around 29 thousand. He [Warren Buffett] is a good businessman; I wish I could have gotten in on that. I helped 'em haul all those trailers to Arkansas. I am a tower. I tow mobile homes everyday."

Those profiting off the resale economy ranged from down-and-out peddlers to iconic capitalists.<sup>123</sup> The profits were large and fast for wholesalers. While smaller and

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<sup>122</sup> The Clinton Foundation contracted Clayton Homes to build schools in post-earthquake Haiti, which were also found to contain elevated formaldehyde levels and were making students ill (Macdonald 2011).

<sup>123</sup> One more example on the meso-scale: Sales records show that Maurice F. Wilder, a Florida real

riskier for those selling trailers off individually, the gains were substantial enough to keep most resellers hungry for more.

The auctions I attended were commercial reseller auctions and not the original government auctions. The larger of these auctions took place in sizeable gospel-style tents at the center of a sea of thousands of trailers. Auctions of more modest proportions, perhaps just a few hundred units, sprung up in vacant rural lots and a pope-mobile-like auctioneer booth would slowly rove the aisles—briefly stopping in front of each trailer while the auctioneer melodically sold them. Both forms of auction would live stream online. In person bidders would compete in real time with remote bidders from across the country. With a registration fee of a couple hundred dollars, the auctions incentivized bulk purchases whereby these upfront costs would be thinned across multiple purchases. The target customers were secondary or tertiary resellers. Indeed, on multiple occasions I heard the rhythmic chant of the auctioneer break to encourage more bidding, “you can’t make any money off ‘em if you don’t buy ‘em.”

A small fleet of tow truck drivers waited in the wings for work, tinkering with their engines. One group of tow truck drivers told me that many FEMA trailers were being hauled to western Texas trailer parks. Another group at a different auction just stared at me, motionless, until I left. The monotony of selling hundreds or thousands of virtually identical items was sporadically broken up by clean-cut boys banging on the aluminum siding of the unit currently on the auction block. Such sonic jolts occurred during lulls in bidding as attempts to conjure excitement.

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estate and agribusiness tycoon who owns farms in five states, bought 27 FEMA travel trailers for \$84,464 from an auction in Mississippi in early 2010. Having accepted over \$8 million in federal crop subsidies between 1995 and 2010, Wilder has been featured in various media outlets as “the face of corporate welfare” (Gilpin 2011). He did not return my phone calls. It was unclear if Wilder was to use the trailers on his farms for migrant labor, or as permanent housing in his RV parks and retirement communities.

For resellers, the prices at FEMA trailer auctions were already excitement enough. “Like shootin’ fish in a barrel!” a man in a camouflage hat exclaimed to the crowd after winning the last lot before an auction in Hammond Louisiana was rained out. Out-of-towners would often arrive a day before the auction to inspect each unit and fill the margins of the inventory catalogue with various appraisals and notes. Auction days would be a mix of strategies, budgets, gut feelings, and regrets. The latter was the case of Clem Cleaver, a car salesman in small-town Nebraska. He and his brother owned a large two-story dealership on the suburban periphery of town. Drawn by the buzz and promise of easy profit, Clem traveled with his brother down to a commercial FEMA trailer auction in Oklahoma in late 2010. They bought a dozen units and had them hauled up to Nebraska—roughly half remained on the lot when I visited him in the spring of 2011.

— From wire reports

## THE DEAL OF THE CENTURY

**OVER 250 UNITS WILL BE SOLD  
TO THE HIGHEST BIDDER!!**

**TRAVEL TRAILERS – PARK MODELS – MOBILE HOMES**

**FRIDAY, MARCH 4, 2011 @ 10:00 am**  
**Auction Site: 3597 I-10 Frontage Road**  
**Port Allen, LA. 70767**

100+ Travel Trailers – 4+ Park Models – 10+ Mobile Homes  
 Featuring: Puma, Keystone, Coachmen, Forest River, Wildwood  
 and Dutchmen – Some units with slide-outs  
 Preview: Thursday, March 3<sup>rd</sup> – 8:00 am until 5:00 pm  
 Registration begins at 7:30 on auction day



**SATURDAY, MARCH 5, 2011 @ 10:00 am**  
**Auction Site: 10462 Rock Road**  
**Hammond, LA.**  
**(I-12 to Exit 35-Pumpkin Center Baptist exit)**

95+ Travel Trailers – 7+ Park Models – 8+ Mobile Homes  
 Preview: Friday, March 4<sup>th</sup> – 8:00 am until 5:00 pm  
 Registration begins at 7:30 on auction day

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**Figure 5.1 (Top) FEMA trailer auction advertisement in the Times-Picayune. (Bottom) Auctioneer silhouetted in his mobile auction podium. Hammond Louisiana, March 2011.**

Like most resellers, he was reluctant to talk. Like most resold units, the warning stickers on Clem’s units were removed. We only spoke for 10 minutes before he asked me to leave his office. As a last ditch effort to demonstrate that I had some utility to him, I showed him a map I had made of the national resale. He was intrigued, and had me text him the image. I told him of an upcoming auction in Louisiana he could attend online. After a glimmer of excitement in his eye, he visibly changed his mind and released a deep breath, “to be honest with you, we really got took on some of those trailers. We really didn’t make much profit at all.” “Yeah?” I responded with surprise. He tightened his lips “It was the transportation [costs]. Those are the guys that really made the money,” he said and shut the door. To those over a thousand miles away from the Gulf Coast, the profitability of the trailers was increasingly phantasmal. The trailers’ mobility did not come without cost.

About an hour west from Baton Rouge I met a FEMA trailer reseller named Ted, whose transport costs were antithetical to those of Clem. Ted’s repair shop and dealership—a dozen or so trailers on a rutted mud lot—sat just across a country highway from one of the larger FEMA trailer storage facilities. Ted had been living

in Michigan and oscillating between construction work and demolition jobs before he moved south to get into the FEMA trailer business. He maintained a business partner in Michigan and would ship many of his trailers up there, in addition to selling them directly off his lot. When I sat down with Ted in his FEMA trailer office, he let me know straight away that there were valances of the FEMA trailer economy that I would never know. After reading my consent form he quickly responded, "Now, I'll talk to ya, but I'm not going to *talk* to ya." He elaborated:

Basically, there's a lot going on out here. Some of these fly-by-night shops are making people pay an extra 300 bucks for the trailer's title, which ain't legal. Others aren't even certified dealers like we are. Some are even stealin' them out the yard [the storage area]. I've been documenting all kinds of things, I've got a stack a papers this high [he raises his hand to a foot and a half above the table], big things about FEMA and what's going on down here. It's a mess, but I'm not gunna tell you about it.

Maintaining eye contact, he finished off what looked like his second beer of the afternoon, "After I'm done here, probably around September, I'm going to sell all that information to Wolf Blitzer [a CNN host] for a quarter million dollars." A wry smile opened up across his face as he cracked into his next can.

Two Septembers came and went, and CNN has yet to run an exposé on FEMA trailer resale. Like Clem and his trailers, the speculative profitability of Ted's information on resale double-dealing proved to be illusory. Such situations—where reseller dreams significantly outran gains—were of a distinct minority for those I spoke with. Most wished to utilize insights from my research to acquire more trailers. One mobile home park owner in Arkansas shoved a wad of one-dollar bills into my pocket in the hopes of securing an inside man. While disappointment in FEMA trailer profitability was rare amongst resellers, misrepresentation, in some form, was nearly ubiquitous in achieving such consistent earnings.

## **Accumulation by Dispossession**

Deceit is not an unexpected feature of accumulation. Indeed, Marx avers that the role of coercion or treachery in capital accumulation “plays the same role in political economy as original sin does in theology” (Marx 1990 [1867]: 873). The use of force or misrepresentation, in the form of feudal serfdom, the enclosure of the commons, or slavery, was necessary to bring the original laborers into line with the desires of the first commodity producers. Stolen labor is capitalism’s stolen apple, which affords it the baseline fuel to carry on. Although capitalism’s original sin, Marx contends, is reproduced in the colonial territorial expansion (ibid: 931) it very much remains “the *pre-history* of capital, and of the mode of production corresponding to capital” (ibid: 875, emphasis mine). Dispossession is the kick-start that initiates capital accumulation but, in Marx’s view, it is a violence that is left behind as the market apparatus lurches into actuality.

But just as original sin lives outside of the bible as a historical document and has come to be representative of the ongoing sin inherent in humanity, treachery remains an essential resource of capital accumulation. David Harvey extends Marx’s thesis of original, or “primitive” as Marx called it, capitalistic sin to that of an essential and ongoing process Harvey refers to as “accumulation by dispossession.” Accumulation by dispossession is the accrual of capital by way of predation, fraud, or violence. This attritional process lies at the heart of the overproduction ‘spatial fixes’ discussed earlier. Not only does capital externalize its crises, which is where Harvey locates the majority of his analytical attention, but it also “internalizes cannibalistic as well as predatory and fraudulent practices” (Harvey 2005: 148).

The FEMA trailers are revelatory of multiple aspects of the interior workings of accumulation by dispossession (hereafter AbD). The trailer's means of conveyance was often that of misrepresentation or fraud. Harvey squarely locates the process of 'flipping' substandard housing, artfully embellished by cosmetic enhancements (here as easy as removing a FEMA trailer's warning sticker), within AbD (2005a: 152-153). Flipping was commonplace in the FEMA trailer market. One Florida FEMA trailer reseller, named Wade Haldane, candidly categorized his business as "flipping" to a reporter with whom I was collaborating.

GSA sales records show that Wade, who lives just east of Tampa, bought 75 FEMA travel trailers from federal auctions in Florida beginning in February of 2007. Wade set up a limited liability company he named "E-Z RV" and began selling his trailers on eBay with deceptive photos and descriptions. Meredith Hanes, a retired schoolteacher living in rural Missouri, bought a former FEMA trailer from E-Z RV for her son to live in after his divorce left him homeless. In June of 2007, she paid \$6,035 for the trailer and just under \$1,500 dollars to have the unit towed to Missouri.<sup>124</sup> Meredith assumed she was saving over \$12,000 by opting for a "nearly new" trailer over a brand new unit. Meredith, who I met for breakfast at a McDonalds in western Missouri, recounted receiving the trailer:

I was in Michigan working for my older son because they were off on vacation. My phone rings and it's my husband and younger son: the trailer had arrived. They had seen the pictures on eBay, like 20 pictures, and they said, "this isn't what you bought. This is a piece of crap. This is terrible, do something." What am I to do, I'm up here. And then another week went by and the whole thing broke [in the news] about formaldehyde. And how everybody was getting sick and people were dying and stuff. The phone rings again and its my husband telling

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<sup>124</sup> By searching sales records for the VIN number of Martha's trailer I was able to find that Wade paid \$4,060 dollars for her trailer on February 1<sup>st</sup> 2007. This is a similar profit margin to what he described in interview as his normal profit margin.

me what he just seen on the news and I go, “oh my god, what are we going to do now?”

The level of deception was two-fold. Not only was the quality misrepresented, but the housing was chemically rendered un-useable. An indoor air quality test conducted in July of 2007 on Martha’s trailer found the indoor formaldehyde concentration to be 254 ppb, over 3 times higher than the WHO’s maximum exposure guideline for half an hour of exposure.



**Figure 5.2 Meredith and her FEMA trailer. Tightwad Missouri, April 2011.**

Wade did not respond to Meredith’s messages, in which she asked for a refund or explanation. There was no way for her to enroll in the federal refund program as a secondary purchaser. Out of frustration she began contacting other eBay users who bought from E-Z RV. She furnished me with printed copies of the correspondence

when we met. One man spent over \$400 on fuel driving a  $\frac{3}{4}$  ton truck to pick up his trailer. He had specifically asked if it was a FEMA trailer and was told that it wasn't. Upon inspection of the trailer he demanded his money back and Wade obliged on the condition that the man didn't leave negative feedback on eBay. With the exception of the man above who was reimbursed, leaving negative feedback was the only recourse sought by those Meredith surveyed. An older couple wrote to Meredith of their economically enfeebled position, "we have no choice but to live in it, even with all the issues." Wade quickly shuttered his company to avoid litigation.<sup>125</sup> The trailer still sits on Meredith's lawn, growing mold and slowly sinking into their yard.

Meredith often describes where she lives as Nowhere USA, as the closest town, Tightwad Missouri, has a population of 62. In September of 2010, she saw a FEMA trailer for sale on the side of the road in Tightwad. A month later, in a larger town 12 miles away she noticed two used car dealers both selling a handful of used FEMA trailers. A larger lot on the outskirts of town had approximately 500 units for sale. These were trailers sold at post-moratorium auctions, which began in 2010 and rapidly innervated out-of-the-way America. Meredith began to see herself as a victim not of a one-off scam but a systematic deception. She approached all three dealerships posing as someone interested in living full time in one of their trailers and at all three locations she was told that she would have no problems living in their units. At all three locations she noticed the negative space where warning stickers had been stripped off.

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<sup>125</sup> Wade is not only a perpetrator but also a victim of larger grey economies and circuits of exploitation that thrive disproportionately on the lower class. For example, his mug shot, date of birth, and home address are readily available on the for profit website arrests.org. This website is one of many that acquires mug shots as public documents and in an attempt to "monetize humiliation" (Segal 2013) the website charges \$179 for their public removal. He was arrested for driving under the influence in September of 2008.

Meredith had also called the phone number on the for-sale FEMA trailer in Tightwad and left a message warning them of the potential harm they could inflict on future buyers. Within a few weeks she noticed the trailer had been pulled off the highway and stored in their barn. She felt reassured that they “did the decent thing” and “got stuck with one also.”

Meredith often insisted that she was “not the average” FEMA trailer owner, and as her teachers pension and her husband’s auto assembly line pension landed them squarely in the upper working class, she was right. Her son wasn’t economically forced to tolerate exposure and the other adversities multiplied by FEMA trailers. Meredith’s story evinces the multiple valences of both accumulation and dispossession in the case at hand and how each are modified by class. Unlike the traditional flipping of stick-built homes, the low-income families that bought FEMA trailers became dispossessed of their savings not by foreclosure due to an inability to meet exploitatively steep mortgage payments or costly maintenance issues—both those costs are relatively limited for 250-square foot trailers. By and large inhabitants did not become dispossessed in terms of losing legal possession of their trailer. Rather, FEMA trailer owners became dispossessed of the use of their trailer, if they had the means to not reside in it, or dispossessed of their corporal capital—their health and wellbeing—if their budgets usurped every other option but to endure exposure.

Similarly, Tom Perreault observes in the context of Bolivian indigenous communities’ gradual infusion by mine-related pollution a “complex relationship between the accumulation of toxic sediments and the dispossessionary effects of capital accumulation” (Perreault 2012: 2). Perreault notes that chemical build-up in agricultural lands and waters wrested campesinos of their agrarian livelihood. Such

toxic releases functioned as “ecological fixes” (Bakker 2009) by forcing the environment and those that lived off the local environment to absorb waste storage costs, but this form of dispossession did not “free up” land or water for investment of overaccumulated capital (Perreault 2012: 15). In this way Harvey’s formulation did not hold true to Perreault’s findings. As a result, Perreault found it useful to invert Harvey’s formulation and propose a “dispossession by accumulation” wherein dispossession is an incidental outcome of toxic externalities and not a strategic means to further ends.

Although Perreault does not theorize it as such, dispossession by accumulation is perhaps more productively understood as the biopolitical function of letting die—where letting die, as outlined in Chapter 3, leans towards making die. In the case at hand the facilitation of harm is more patent as toxins are not externalized to the environment, which in turn hampers one’s agrarian livelihood, but rather directly infused into human inhabitants and their animal companions. Large-scale crises in the overaccumulation of capital are broken apart and funneled into family-sized health crises. Accumulation by dispossession, as today’s predominant mode of capitalism, and biopolitical abdication, as a prevailing and expanding mode of governance, are mutually constitutive of the landscape occupied by FEMA trailers and their inhabitants.

### **Landscape of the Dispossessed**

Over the course of my second year of fieldwork it became apparent that the wide-ranging destinations of the trailers bore profound similarities. Former FEMA trailers were auctioned off in Joplin, Missouri, after 8,000 houses were destroyed by tornado in the spring of 2011. So too did they roll into tornado-torn Alabama within

days of a series of destructive storms. An investigative journalist and I drove up from New Orleans to the tornado-ravaged northwest Alabama town of Phil Campbell. The Mayor, whom we met while he filled out disaster assistance forms for his mother-in-law, informed us that 40 percent of the city's homes had been destroyed by a storm which bore 210 mile an hour winds and killed 26 people. FEMA had not yet set up mobile homes for the displaced to reside in but the desolate landscape was dotted with a handful of former FEMA trailers, purveyed by the free market. Some were being lived in, the Red Cross was using one as storage, and more still were waiting to being sold.

The trailers gravitated to high foreclosure counties in Florida, California, Michigan, and Nevada. At least a thousand FEMA mobile homes were donated to Tribal Governments hard struck for housing (FEMA 2007). FEMA trailers sprung up in pockets of suburban poverty on the periphery of Houston and rural poverty in South Dakota, Missouri, and Indiana. They rolled towards oil patches, and became migrant labor camps. The list goes on.

The combined features of the trailers' desperate architecture and rock-bottom price exhibit magnetism to misfortune. Affordable portables, FEMA trailers are both mobile and the barebones of shelter. The pattern of their distribution reveals an aspect of the multiple housing crises of the contemporary American landscape. The aggregate woes of poverty, foreclosure, and natural disaster often co-present with personal hardships such as downsizing after a divorce, the loss of a home in a fire or, most common of all, the economic pressures of old age.

### **Articulating Dispossession**

The regional constellation of trailers that constituted the original deployment

of the FEMA trailers appears highly condensed when compared to its national diasporic form. The strife of current inhabitants span the less concentrated and less visible tribulations of housing crises that are not bound to the flight paths of two hurricanes. The trailers constitute a material continuity between these two housing crises—those of the gulf coast in 2005 and those currently found across the country. Yet it is not engineered wood alone that connects these two incarnations across space and time.

I tracked down Paul Stewart in a small port town near the Massachusetts-New Hampshire border in the summer of 2011. A one-time Mississippi FEMA trailer resident, Paul was the initial whistle blower for the trailer formaldehyde issue in 2006 and remains an advocate for environmental regulation. An hour and a half into our conversation Paul, a 45 year-old fast-talking law student, slowed down the tempo of his words and leaned on the rail of the dock. Looking out into the harbor he went on what he thought was a tangent:

I was watching a thing... this doesn't really have much to do with formaldehyde or FEMA but uh... I was watching a thing on the news the other night about the evictions that were going on in Nevada. They showed a deputy go to a house and he gave them ten minutes to get everything they could and get out. And ya know they knew the eviction was coming obviously but they has a baby and everything... in this country, we don't expect to be displaced. People are seeing it more now because of foreclosure and all the rest of it. I feel bad for them. I've been through it—in a different kinda way, but it's the same thing. You're losing your home.

*It's the same thing.* Paul sentimentally merges divergent etiologies of home loss— fiscal and physical—into their common outcome. The original and current locations of the FEMA trailers are linked not only materially—by the travel of the trailers—but by the common experience of displacement. This affective connection

parallels my observation of the spatial overlap of housing crises hotspots and trailer resale locations. While Paul was alone in recognizing glimmers of his past situation within the ongoing crises across the country, the dispositions of those who sought refuge in FEMA trailers in 2005 along the Gulf Coast and those who began inhabiting them in 2010 across the country bore profound similarities. Both groups of inhabitants were gripped by a countervailing mixture of feeling grateful for a roof over their head and anger over shoddy manufacturing and oversight.

While sharing a common situation of housing desperation, the differences between the lives and afterlives of the trailers is telling. For the majority, feelings of housing desperation were a thing of the past for Gulf Coast residents by the time I spoke with them, even if the chemical residues of their time in the FEMA trailers still haunted the present. For current FEMA trailer inhabitants, sentiments of housing insecurity extended from the present into uncertain futures. This is in part due to the perceived difference of “natural” and “social disasters” where natural disasters receive large amounts federal and private aid to help individuals and communities recover where as “social disasters” often only exist in political conscientiousness in statistical form. For example, while national attention was focused on the epidemic of foreclosures that was underway during my fieldwork, the focus was to reduce the numbers, not help displaced individuals “get back on their feet.”<sup>126</sup>

Displacement was the forerunner of the original deployment of the FEMA trailers, but the antecedent to the second round of FEMA trailer inhabitation was not always and everywhere that of dislocation. The trailers also congregated in makeshift boomtowns where jobs exceed shelter. In late June of 2010, on my first morning back in the US for my doctoral fieldwork, I woke up to the sound of *The New York Times*

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<sup>126</sup> Similarly hurricanes were often alluded to as external “acts of god” and not social phenomena, unlike financial shortcomings.

sliding under my bedroom door. The top headline above the fold was “Banned Trailers Return for Latest Gulf Disaster” (Urbina, 2010). Scores of FEMA trailers were either parked in coastal Louisiana to house clean up workers or were on route to fill the burgeoning demand for housing. While this location of FEMA trailer redeployment corroborates my thesis that the trailers display a magnetism to misfortune due to their architectural minimalism, extremely low cost, and mobility, the BP oil drilling disaster was not a housing catastrophe. The spill did not destroy any homes other than bunks on the rig.

The trailers did not gravitate to the site of the spill because of the ruination of homes, be it physically or fiscally. On the contrary, FEMA trailers were springing up in *ad hoc* parks because an explosion of clean up jobs pulled people into a space with a dearth of housing. It was the potential fortunes of outsiders and not housing misfortunes that landed the trailers back, in some cases, on the very land where other FEMA trailers had been originally deployed in 2005/6.

Similarly, I would soon receive emails and phone calls from FEMA trailer inhabitants on the oil fields of Oklahoma, Texas, and North Dakota. North Dakota’s Black gold boom is perhaps the most dramatic. Following the 2006 discovery of the Parshall Oil Field oil production has increased almost ten fold: from 3,053,491 barrels per month in January of 2006 to 28,256,390 barrels per month in August of 2013 (North Dakota Department of Mineral Resources 2013). The state currently boasts the nation’s highest budget surplus—some \$1.66 billion—and lowest unemployment rate—3% (Smith 2013).

North Dakota’s oil boom didn’t just leave the roughnecks that came looking for jobs without shelter. Inflating rent, property tax, and grocery prices displaced lifelong residents. A single 55-year old water treatment plant technician I spoke with

could no longer afford his brick and mortar home in Minot, the urban hub of the State's emergent oil business. He was financially forced to relocate to a FEMA mobile home placed on a rural lot, and has since experienced respiratory and cognitive decline, in addition to increased feelings of isolation and depression. A Montana man bought a FEMA travel trailer in late 2013 for a friend to work on the oil patch. He concisely summarized the situation in a text message to me, "if it wasn't for the housing crisis here, this thing would spend its retirement as a storage shed on wheels." Members of Indian Nations in North Dakota, who received donated FEMA trailers, were renting them out to affluent, yet homeless, oilmen. In this last, and anomalous formation, reservations that bear longstanding housing shortcomings (Cooper 2011) abutted the antithetical and recent scourge of oil boom housing shortages.

### **Mobile Homes and Housing Crises**

The migratory patterns of the trailers are following both ends of capital crises—where capital spouts with no end in sight, in addition to where it has dried up or perhaps only minimally existed. The FEMA trailers, as the cheapest of mobile homes, serve as an exceptional barometer for these capital-induced housing crises as they are more fluid than traditional homes rendered immobile through their tie to land.

In this section I briefly outline the historical role of mobile homes in responding to housing crises. While the FEMA trailers are an extreme example, the tie between mobile home demand and housing shortcomings in the United States is longstanding. As mobile home historian Allan Wallis asserts, "significant advances in the use and design of mobile homes have occurred primarily in periods of unmet housing demand" (Wallis 1997: 25). The industry has seen their greatest expansions

in the form of stopgap supplements to depleted housing markets.

The FEMA trailers' most discernable ancestors date back to the dawn of the auto age at the beginning of the 20th Century. The car and an ever-improving network of roadways beckoned Americans into new valuations of mobility and "the contemporary mobile home grew out of a desire to ever-improve this attachment to the automobile" (Andrachek 1971a: 8). Tellingly, house trailers did not become a coherent phenomenon until the early-to-mid 1930s, the bleakest period of the Great Depression (Saunders 1936: 12). As new conventional home construction stalled out during the depression, "the shortage of affordable housing plus financial stress forced ever larger numbers of people to become permanent trailer residents" (Hart et al. 2002: 9).

During the social and economic reshuffling of the Second World War, military personnel and those building wartime infrastructure were housed en masse in mobile trailer villages. Over 120,000 trailers were constructed in the US to house defense industry workers (Kronenburg 2002: 82). After the war and at the dawn of the baby boom, the single family detached housing market quickly became oversaturated with demand and returned veterans starting new families streamed into mobile homes. The wide-variety of Americans that inhabited trailers in the war effort helped to transform mobile homes in the national imagination from the dwellings of the itinerant fringe into a legitimate residential alternative (Hart et al. 2002: 14).

In the late 1960s and early 1970s, mobile homes became an increasingly popular fallback means of accessing home ownership. Inflation was steadily mounting and the price of housing inched out of reach for almost half of American families. In a 1970 Housing and Urban Development (HUD) report, the Nixon administration praised the mobile home industry for mitigating the effects of housing

crisis on those with low and moderate incomes (AP 1970: 5 D).<sup>127</sup> Of all single-family homes sold in 1969, over 40 percent were mobile homes (Morris 1971: 3).

Synchronous to the market-mediated mobile home amelioration of a national housing crisis, the federal government provided free post-disaster emergency housing units in the form of mobile homes for the first time. In 1969 HUD sent several thousand mobile homes to house those displaced by Hurricane Camille, which made landfall in the central Gulf Coast. This intervention was enabled by the Disaster Relief Act of 1969 (Moss 1999: 316), thirty years of government activism, and the increasing federalization of disaster response due to cold war civil defense security regimes (Rozario 2007: 156-173). The provision of emergency housing to discrete disasters remains a federal responsibility today. The ad-hoc provision of mobile homes to aid systemic housing crises remain market-based.

To focus solely on large-scale crises in addressing the history of the mobile home would be to overlook the piecemeal economic insecurities that make up the day-in day-out inhabitants of trailers. JB Jackson, a scholar of the American landscape, observed the economic sculpting of low-income lodging across several generations. From modern day mobile homes back to the early box house, Jackson persisted in seeing “an underlying similarity among those flimsy short-lived American dwellings [...] All of them have served as dwellings for people who have to move where the job is” (Jackson 2000: 222). In spite of this observation, Jackson resisted analyzing the mobile home entirely in socioeconomic terms. Rather, he chose to romantically emphasize the “freedom” of mobile dwelling as their real *raison d’etre* (ibid).

Historically, escape was indeed fundamental to the fantasies that gave rise to

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<sup>127</sup> In this same report HUD began counting mobile homes as residences for the first time, increasing the likelihood that their statistics would reach the administration’s home construction goals.

“wheel estate” in the first half of the 20th century (Wallis 1997). As they were first introduced to America, trailers were more akin to land yachts, a “play toy for the rich and near rich” (Thornburg 1991: 8). Their contemporary deluxe descendents still abound. Some are looming vacation homes, which are navigated between national park campsites in the summer and have video cameras for rearview mirrors. Retirees—who seek to avoid property taxes, mobile home park rent, or other sedentary constrictions—pilot more humble motor homes across the country. They set up camp in Wal-Mart parking lots, plant folding chairs on the asphalt, and hope to not be harassed by the police (Hawes-Davis & Lilburn 2002). These roving retirees circulate in numbers great enough to warrant their own magazine and specially tailored health insurance plans (Sanchez 1999). The FEMA trailers are distant kin to even this precarious existence of drifting across the country, hopping between parking lots, and are completely different species to the contemporary versions of the “land yacht.”

FEMA travel trailers are the absolute lowest rung of the housing ladder. They are not motor homes, as they do not have an engine and require towing. They are not mobile homes as the Department of Transportation and not Housing and Urban Development regulate them. They do not have holding tanks for water and waste and are thus immobilized by their required attachment to an effluent waste system. They are neither vehicle nor home, fully mobile nor permanent. While the FEMA trailers “fall through the regulatory cracks” as a plaintiff attorney in New Orleans told me with frustration, their *de facto* exemption from regulation does not confer a sense of “freedom” to inhabitants but the enduring unease of domestic limbo.

The FEMA trailers are extreme examples of both the toxicity of manufactured housing and the movement of affordable housing to spaces of crisis, but empirical

observations need to be carefully separated from the social stigmas that surround the manufactured housing industry. In the US it is commonly perceived that owning “anything less than the single-family-detached house is [...] a ‘compromise’ with the American dream” (Perin 1977: 64), reinforced by fears that mobile home inhabitants serve as sub-optimal neighborhood stewards as they can “pick-up and go.” Yet the mobility of the lion’s share of mobile homes is only exercised between the factory, dealership, and initial installation site. It is often noted that the mobility of a mobile home is in itself a misnomer, as an estimated 95 percent of mobile homes never move from the ground of their initial placement (Hart et al. 2002: 31; Kronenburg 2002: 80, cites 97 percent). Similarly, an auto-ethnographic account of mobile home ownership and relocation concluded, “there seems to be as much if not more work involved in moving a mobile home as in moving from one conventional house to another” (Andrachek 1971b: 31).

In her wide-ranging study of social order and land use in the United States Constance Perin contends that single-family-detached homeownership is the normative housing category because mortgages confer status to owners by virtue of having qualified—via credit ratings—for a mortgage/debt relationship with a bank. This “indebtedness has become a social good” (Perin 1977: 76), a norm that serves a market function: to “enhance predictability in housing and banking industries” (ibid: 73). Research indicates that mobile home dwellers are not likely to maintain their home with less conscientiousness than conventional homeowners or “pick-up and go” (Boehm and Schlottmann 2004).<sup>128</sup> These findings suggest the contemporary pertinence of Perin’s assertion that the second-class status of mobile home dwellers does not emerge from their collective characteristics but is projected upon them by a

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<sup>128</sup> Additionally greater savings, compared to other forms of tenancy, are afforded to conventional homeowners as a result of a tax credits rather than being the upshot of their cash outlays (Boehm and Schlottmann 2004: 60).

mortgage-based and credit-based value system—mobile homes are often sold on payment plans not mortgages—and legal vulnerabilities due to under-regulation (Perin 1977: 121). In this way there is a small amount of truth to JB Jackson romanticization of the freedom of mobile living. Even if mobile homes were actually mobile, it is not freedom from spatial constraints that makes them desirable but a freedom from cumbersome debt that is also generative of their stigma.<sup>129</sup> Theoretically, itinerant laborers could follow jobs by owning and selling a sequence of immobile mobile homes—traveling *through* them rather than *with* them—but renting would likely prove to be the more fluid means of inhabitation.

## Conclusion

This chapter tracks the redistribution of the FEMA trailers on a national economic and geographical scale. The situations of contemporary FEMA trailer inhabitants are superficially diverse; yet share a common substrate of housing crisis and precarity. The predicaments range in scale from individual misfortune such as fire or death of a spouse to larger scale social forces such as foreclosure, roughneck gentrification, reservation housing shortage, old age, or rural/suburban poverty. In short, the distribution of the FEMA trailers can be read as a weather map of multi-scalar housing and capital crises in the contemporary United States.

The FEMA trailer redistribution was not simply driven by the clean logics of supply and demand. A vast majority of inhabitants purchased their trailer as a result of misrepresentation of the unit or its health risks. Detailing of the internal

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<sup>129</sup> It should also be noted that mobile home manufacturing also allows for greater capital accumulation by single entities, as there are only a relatively small number of mobile home manufacturers compared to the large number of small-scale contractors responsible for conventional home building. In 1968 there were approximately 360 manufacturers (Morris et al 1971: 1). Today, HUD's registry only shows 172 manufactured home factories, many of which are owned by single companies. For instance, Fleetwood Homes—a key FEMA trailer supplier—has 19 plants. (<http://www.hud.gov/offices/hsg/ramh/mhs/mfirlst.cfm>, Accessed December 27, 2013).

“cannibalistic” features of accumulation by dispossession and dispossession by accumulation helps us understand the mechanics of neoliberalism and the biopolitical regimes it informs.

While the FEMA trailers reveal, reinforce, and accentuate AbD, mobile homes in general should not be viewed with contempt. Mobile homes have a long tradition in the US of both serving those who’s employment is insecure or highly contingent on mobility, and also fulfilling desires for home ownership for a wider range of publics during times of housing shortage. Indeed, both mobile home use and design innovation strode forward most noticeably in the aftermath of war, financial downturn, or natural disaster. Mobile homes represent the most affordable non-subsidized housing resource available to lower and moderate-income families (Boehm and Schlottmann 2004: 2).<sup>130</sup> Inhabitants avoid the financial bondage of a mortgage, yet they encounter the social costs of stigma and the biological costs of increased formaldehyde exposure. While unique in many facets, the following chapter will address the ways in which the FEMA trailers may well be a harbinger of domestic toxicity rather than a red herring.

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<sup>130</sup> This is if the land upon which the trailer rests is also owned and not rented.

## CHAPTER 6

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### **‘A human Geiger counter’: Formaldehyde, Somatic Science, and the Chemical Sublime**

The air was rich with extrasensory material.  
Nearer to death, nearer to second sight.  
—Don DeLillo (1985: 355)

Recent attempts to theorize the body tacitly employ the terminology of airborne chemical exposures to explain the body’s relation to the world. Scholars have described the ancillary processes of being a living body as: becoming sensitive, feeling atmospheres, somatically judging environments, or becoming corporeally aware to non-humans (Latour 2004, Anderson 2009, Berlant 2010, Stewart 2011). In this chapter I argue that these affective process of attending to the minute aberrations of the body and atmosphere are the primary means of discerning low-level domestic chemical exposures. This chapter both draws on Mauss’ assertion that “man's first and most natural technical object, and at the same time technical means, is his body” (Mauss 1973 [1934]: 75) and further draws out the irony embedded in his outdated language, as I observed the use of bodies as a technical means to knowledge to both constitute and be constituted by gender normativity.

The work of the chemically concerned is enmeshed within an apprehension of their own bodies that is simultaneously sensual and epistemological, referred to herein as ‘bodily knowledge’ and situated within a process of ‘bodily reasoning.’ The domestically exposed attune to their own affects as a means of further discerning the imperceptible constituents of their indoor atmosphere. This is not a practice confined to the “deviant agents” of those afflicted by multiple chemical sensitivity (Alaimo 2010: Chapter 5, Kroll-Smith & Floyd 1997: 10) but a somatic and epistemic capacity

of all human bodies.

This chapter unfolds a series of nested sensory practices. It begins with the specific affects of a domestic chemical assessment scientist, which contribute to a growing literature on the body as part of the existential, pedagogical, and ethical grounds of cultures of science (Masco 2004, Myers 2008, Helmreich 2009, Pickersgill 2012). It then widens to discuss the larger gendered sensorium of corporeal indoor air quality perception and the instrumental use of sensitized bodies to identify the sources of domestic chemical exposure. Finally, the chapter dilates to the national level, to analyze the historical aesthetics of formaldehyde through the scent-concept of the “new car smell.”

This chapter focuses on illness as a means of understanding indoor air quality. This argument is contrary to Altman and colleagues’ pioneering analysis of women’s “exposure experiences” in which they assert, “[i]n the case of household pollutants and chemical body burden, science has been the primary means through which embodied and indoor pollution have been ‘discovered’” (Altman et al. 2008: 419). I claim that the attuned body is the primary substrate of domestic formaldehyde exposure discovery.

My focus on the embodied comprehension of air’s chemical additives empirically bolsters Lauren Berlant’s literature and art-based claim, “that bodies are continuously busy judging their environments and responding to the atmospheres in which they find themselves” (Berlant 2011: 15). Bodies are sites for both actively absorbing the world, and being put into motion by its constituent hodgepodge of humans and non-humans. Indeed, Latour asserts that the body is “a dynamic trajectory by which we learn to register and become sensitive to what the world is made of” (Latour 2004: 206). Without such sensitivity, he asserts, we become “dumb and drop

dead.” While Latour’s prose reads melodramatically in the context of his abstract theorizations of the body and his later example of perfumers receiving scent training, it rings true in relation the case at hand.

The apprehension of subtle and invisible domestic toxins is a matter of life and death, mediated by “patho-logical” bodily processes. Kathleen Stewart has written incisively on this dialectic of bodily harm and bodily knowledge, “The body consumes and is consumed. Like one big pressure point, it is the place where outside forces come to roost, condensing like thickened milk in the bottom of the stomach” (Stewart 2005: 1024). The various processes of corporeal judging, sensitizing, absorbing, attending, consuming, and responding are all part and parcel of pervasive bodily practices that Stewart encapsulates in the phrase “atmospheric attunement” (Stewart 2011; also *cf* Anderson 2009; Choy 2012). In what follows, I discuss literal attunements to the qualities of indoor atmospheres.<sup>131</sup>

Jones (2012) notes that phenomenological studies of pollution and environmental health lack an appreciation of the bodily knowledge of exposure and primarily direct their analytical attention towards olfaction (*cf* Auyero and Swistun 2009, Brant 2008, Fletcher 2005, Jackson 2011, Reno 2011). The displeasing smell of contaminated environments remains the most developed tract of phenomenological research on exposure to environmental toxins. Yet, the actual embodiment of inhaled chemical molecules has been largely overlooked. In my experience such microscopic encounters are more readily sensed by less nameable and more diffuse sensory practices. In the penultimate section of this chapter, I discuss my own exposure experience to epistemologically ground the “radical empirical” capstone of my argument.

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<sup>131</sup> Closer to Stewart’s more general use of the term ‘atmosphere,’ I discuss the surreal ambiance of the FEMA trailers in Chapter 4, an ordinary which is both resisted and overpowering.

This chapter seeks to move beyond the ‘scents’ of exposure to focus on the embodied senses of exposure that constitute the sensoria of residential chemical perception. In sum, this chapter examines the gendered and embodied ways of knowing or un-knowing chemical exposure. My account draws on a deep phenomenology of bodily formaldehyde detection that focuses on the visceral and indeterminate sensorial facilities rather than mere smell. The latter may serve as an intimation of exposure for a wide variety of exposures but is not the epistemic basis for chemical knowledge of everyday formaldehyde exposure.

### **Gender Forming**

In the course of my research my contact information circulated widely on the Internet. From environmentalist blogs to news stories, activist listservs to press releases issued by a collaborating indoor air quality laboratory, my email address and research interest in domestic formaldehyde exposure made the rounds. Of the approximately 100 people that contacted me about their formaldehyde concerns between 2010 and 2013, only one in ten was male. Time and time again I found myself speaking with women about their suspicions of exposure, their health issues, and the frustrations related to an invisible chemical agent and a potentially nebulous etiology. They often had contacted lawyers, consulted with environmental scientists and advocates, and appealed their concerns to governmental authorities. All the while, their husbands gazed at the TV from a recliner, hoping to be left out of the conversation. A handful of men were directly involved in trying to scrape together answers and solutions for the emergent illnesses of themselves and their families, but most were actively indifferent. In one instance, after two afternoons of long discussions on domestic chemical off-gassing with a Midwestern woman, her husband

had not said a word. “Oh. I don’t know about all that,” he finally commented, shaking his head when his wife stepped out to run an errand. “We are getting older... you know?” he suggested, taking his eyes off the cable news to look at me with a raised and wrinkled brow.

Not wanting to be ‘fuss with,’ ‘bothered with,’ or ‘get worked up by’ potential chemical exposure were the most cited reasons for male absence from the investigative or ameliorative process. Many of the older residents voiced a quiet alternative etiology; their ill health was merely part of the natural deterioration of geriatrics. These men advanced the depoliticized opinion that their bodies were weathering at an appropriate rate. As perhaps best illustrated in studies on asbestos inhalation and ensuing illness, admitting vulnerability to toxic exposure threatened to destabilize the self-images of rugged manliness held by men in the UK and South Africa (Waldman 2012: 130-133). For example, Scottish dockworkers refrained from seeking asbestos exposure protection; as such practices would acknowledge potential weakness and undermine their virility (Matošvsević 2010: 33-34). For those few men that I spoke with in the course of this research, consigning bodily decay to the unavoidable process of aging was a means of rejecting the possibility that their bodies were permeable or vulnerable to chemical harm.

Danny, a trailer dealer in Mississippi active in organizing inhabitants of resold FEMA trailers, called me weekly or sometimes daily to swap FEMA trailer news. On one such call in early 2012, Danny shared his observation that men seemed to hold backseat roles in sleuthing out the cause of illnesses even though their symptoms were often more severe their wives’. When I asked him why men tended to be inactive in residential air quality inquiry he didn’t hesitate in responding, “Oh, the girls just have more time.” Danny’s explanation drew from a pervasive cultural assumption of the

relatively higher work-time load of men (Hochschild and Machung 2003); an untenable assessment in light of my observations of female informants' forfeiture of their little leisure time for chemical inquiry.

While it has long been noted that women predominate challenges to toxicity issues in general (Brown & Ferguson 1995), chemicals that emanate from and directly disrupt domestic space are particularly predisposed to being designated as women's work. The large body of research on work in the domestic sphere (Finch 1989, Twigg 2006, Twigg et al. 2011, Ungerson 1987, Widding Isaksen 2005) highlights the feminized and unpaid labor associated with care. As feminist philosopher of science Sandra Harding summarizes:

[w]e can see that women are assigned the work that men do not want to do for themselves, especially the care of everyone's bodies [...] bodies of men, babies, children, old people the sick and their own bodies. And they are assigned responsibility for the local places where those bodies exist as they clean and care for their own and other's houses and workplaces. (Harding 1993: 55)

Domestic chemical exposures are doubly feminized, as they involve attending to connections between bodies and the home. Just as shaking off a connection between toxins and bodily change enacts masculine gender normativity, sleuthing out the ties between domestic space and bodily harm enacts female gender normativity. Historian Janet Ore, similarly explained the gendered distribution of residential chemical complaints on a semiotic level, "A toxic domestic environment likely harmed those most associated with the home and its symbolism" (Ore 2011: 281). The proportionally higher medicalization of women's bodies when compared to men (Morgan 1998, Conrad 1992) may add a tertiary gendered dimension to the bodily assessment of indoor air. Such research suggests that women are socially predisposed

to monitoring bodily dysfunctions.

To be clear, the issue here is not whether or not women are more biologically reactive to chemical exposures, as is often debated (Alaimo 2010: 117, Fiedler and Kipen 1997).<sup>132</sup> I am not reifying the notion of innate “feminine intuition,” which Margaret Mead cross-culturally debunked long ago (Mead 1981). And indeed, I witnessed both men and women experience the biological symptoms of exposure. The issue at hand revolves around how the various domestic labors, symbolic associations, and bodily practices of men and women in the US form divergent readings of bodily change. One reads symptoms as indicators of environmental problems. The other unknowns them and resigns such somatic irregularities to manifestations of inevitable decomposition. My focus is on attunement to corporal aberrations stemming from contaminated indoor atmospheres, a socialized relation between mind and body.

The chemical awarenesses documented herein more often than not fall outside of the remit of overt feminist practice.<sup>133</sup> They are built upon, yet exceed the bounds of conventional feminized body-work as documented by sociological studies of appearance, domestic maintenance, or emotional management (Gimlin 2007). I observed these largely gendered and somatic means to knowledge both in tandem with scientific practice—as a means of verifying disembodied technical instrumentation—and at the margins of society. This chapter documents how rural working class women living in mobile or modular homes and a female chemical exposure scientist utilize a bodily reasoning of chemical effects and affects to

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<sup>132</sup> The “double exposure” (Chavkin 1984) of working women in the office and through chemical cleaning products at home—not to mention a gender normativity that encourages a higher usage of fragrances, hair treatments and makeup—*may* molecularly inscribe vastly disproportionate chemical sensitivities in women. But this socially inscribed, as opposed to universal, biological difference did not surface during my research. This is perhaps due to the middle class nature of Chavkin’s work on double exposure.

<sup>133</sup> It is also worth noting that the alignment of femininity with the body is not without contention in contemporary feminist thought and is the subject of ongoing debates (Schiebinger 2000, Bordo 2003, Wolff 2003).

understand residential indoor air quality.

## Body Meter

Linda Kincaid introduced herself via email in February of 2011. She responded to a call for participants for my study of the experiences of FEMA trailer residents. An environmental activist had forwarded out the call to what she refers to as her ‘formaldehyde list.’ The list comprises a broad array of individuals interested in formaldehyde, mostly those who have personally felt its effects; from former FEMA trailer residents to consumers of the broad range of products made with formaldehyde and, evidently, industrial hygienists. Linda is a certified industrial hygienist and holds an MPH from UC Berkeley.

In one of her first emails to me she offered up her expertise on formaldehyde assessment, attaching a profile of her residential formaldehyde clients and a graph of the formaldehyde levels in *her own* living room over the course of a day.<sup>134</sup> The curve of the graph rose with the heat of the morning sun, crescendoing in late afternoon and then descended at sunset. The data on her home didn’t reveal particularly high levels. Rather, the graph served as an indication of the difficulty in finding a single representative sample—for formaldehyde off-gassing is protean and highly dependent upon temperature and humidity. And perhaps more importantly, the graph also served as a sign that finding high levels of formaldehyde in the homes of her clients cast a light of caution across domestic air space, including her own. The immediacy of her interest was derived not only from the elevated chemical levels registered by her monitoring equipment, but further by her own symptoms of exposure that maintained a grip on her after returning from the field.

Before meeting in person in suburban L.A. to attend one of her formaldehyde

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<sup>134</sup> Linda redacted all client names and identifying information from this data before sending it to me.

home inspections and to learn to use real-time formaldehyde meters, we spoke over the phone at length. Linda had only become interested in domestic formaldehyde exposure in the last few years. She recalled:

I got my first phone call from a woman who said that she thinks that the house that [her family is] living in is making them sick. I was like, “what are you talking about?” But, ya know, when I started poking around, the EPA website says that a lot of homes do have enough formaldehyde to cause some irritation and their symptoms seemed right. And at that point in time I hadn’t really geared up—I didn’t have the equipment available to do the kind of testing that I do now. I never got real data on that home—*my god*, if I’d had the instruments that I have now I could have really nailed down what the exposures were. But that was the sentinel case that got me interested in the concept.

Her attention was piqued. As a pet project, she began to amass a small arsenal of portable real-time formaldehyde meters. Yet, the vast majority of her work continued to be for industry and the irregular flow of residential clients could not sate Linda’s blooming curiosity about the magnitude of domestic chemical contamination. After her offers to test new subdivisions for free were swiftly rejected by developers, she saw clandestine testing of open houses as her only option for gauging the frequency of elevated residential formaldehyde. Linda set out by herself on spare weekends with the intake hose of her Interscan 4160 formaldehyde meter timidly cresting the lip of her purse:<sup>135</sup>

It was really kind of a lark. Can I find elevated formaldehyde in homes? Is it going to be one in ten? And it turned out that any open house that I walked into—and a lot of the time they have the house’s doors and windows wide open, it is not controlled at all. These houses are by and large empty of furniture. People are

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<sup>135</sup> She also used UME<sub>x</sub> formaldehyde badges to validate her real-time results, as the co-presence of other chemicals can increase or decrease the readout of the real-time meter.

not living in them. I went into unoccupied homes, so I wouldn't have [chemical] interference from the things that people bring into their homes. So I started going to open houses for new unoccupied homes.

Within a few weeks I came to realize that there was a problem here. There is a *huge* problem here. I was getting the kinds of concentrations that they found in the FEMA trailers and these are not trailers; these are high-end Silicon Valley homes.

And I started noticing that homes in one city in particular had seriously raised formaldehyde as compared to others. [...] It turned out that Los Altos passed an ordinance requiring that all their new homes be Green Point rated<sup>136</sup> [...]. Every house I went into had really pretty high formaldehyde and I would have a headache and have trouble sleeping that night and toss and turn all night long. I'd be exhausted the next day and when I did other communities it seemed that the formaldehyde wasn't as high and I didn't have those responses to the same degree or maybe not at all.

While Linda's initial focus had been on the instrumentation alone, as she began to log higher levels in her formaldehyde meter she also began to log these levels with her body. Her symptoms signaled elevated chemical levels as clearly as the LCD readouts of her assessment technologies. In embodying the invisible gas, she utilized not one of the standard human sensory faculties but a calibrated, yet diffuse, awareness to aberration. Her attention attended to the irregular physical state of her neurochemistry.

Appraisals of her clients' homes would often turn back to her own body.

When I asked about the curious symptom of 'intensified dreams' that her clients reported,<sup>137</sup> her first reaction was to describe her own corroborating experience:

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<sup>136</sup> 'Green' homes do pose a potential trade off between energy efficiency and health. As they are sealed tighter and often use the same construction materials as traditional homes, green homes are likely to bear higher ambient chemical levels.

<sup>137</sup> The sleep disorders Linda has recorded are not restricted to nightmares. She notes that several of her married clients now sleep in separate beds due to insomnia or flailing around at night—both are issues reported to me one in three of my informants.

And those were one of my symptoms too; it doesn't seem to happen to everybody. It absolutely is one of my symptoms. It is guaranteed. If I am in a house with 50-60 ppb formaldehyde I will have the utterly weird bizarre freaky terrifying nightmares and that is very consistent. It is not something that happens to me normally, so when it does happen it really stands out.

Linda's scientifically authoritative mind shares the symptoms of her clients and she employs those experiences to, in part, verify their individual and lay experiences on the scale of reproducible and scientifically observed phenomena: *It is guaranteed*. She highlights her symptoms after merely an hour of exposure, bearing corporeal witness to long-term 'low-level' chemical exposure disorders that have been historically disqualified as (female) psychogenic illness (Murphy 2006).

Despite the short duration of Linda's exposures, she is able to surmise formaldehyde levels with an extreme precision. In the above quotation, she asserts that she can sequence the onset of exposure symptoms down to ten parts per billion. In liquid terms that is roughly equivalent to determining the difference between fifty and sixty drops of formaldehyde diluted in a small railroad tanker or 250 chemical drums. In temporal terms, such accuracy is comparable to a margin of error of thirty seconds when measuring durations over the course of a century.

At first blush, the exactitude of her body-meter-air attunement appears to border on the uncanny, if not the impossible. The ability to discern such infinitesimally small differences in atmospheric concentration does not derive from a supernatural capacity on Linda's part. Rather such perceptivity is the result of a mundane monitoring of both repeated bodily irregularities and the levels of formaldehyde found by her meter. These practices are borne out of standard scientific method and everyday corporeal awareness. Linda's embodied awareness to bio-

chemical aberration is not beyond the realm of toxicological plausibility.<sup>138</sup> The aspect of this process that remains inexplicable relates to the limits of toxicological knowledge and not a mythic extra-sensory perception.

While “the exact mechanism of action of formaldehyde toxicity is not clear” (ATSDR 2011), a general progression of its toxicity is known. Formaldehyde vapors enter the body, are absorbed by the mucus membranes of the nasopharynx and lungs, bind to proteins and nucleic acid, disrupt cellular functions, and are quickly dismantled. In the process of metabolism formic acid is produced, yielding the possibility of acid-base imbalance and a range of systemic effects. What little is known of the non-cancer mechanisms of formaldehyde toxicity casts a light of feasibility upon Linda’s experiences.

Operating in tandem with her real-time formaldehyde meters, Linda’s body viscerally logged the chemical exposures of the houses she visited. Over time, she calibrated an understanding of toxic effects to the outputs of her instrumentation, a process of indwelling both the indoor atmosphere and the meter. Scientific instrument and soma evaluated their immediate surroundings in accord. It is through this environmental and technical incorporation that Linda dilates her being-in-the-world (Merleau-Ponty 2008 [1943]: 329) and harnesses the epistemic utility of her body to understand the potentials of domestic chemical exposure, a process I have alluded to with the phrase ‘bodily reasoning.’

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<sup>138</sup> For instance, the onset of the effects she claims formaldehyde has upon her body (50 ppb) is five parts per billion above California’s Office of Environmental Health Hazard Assessment’s (OEHHA 2008) acute Reference Exposure Level (REL) for formaldehyde sensory irritation (45 ppb).

I was not able to closely correlate the onset of my own symptoms to my chemical findings because the FEMA trailers I tested were so homogeneously high in formaldehyde (> 45ppb) and my symptoms were similarly uniform. Yet I can, in line with the radical empiricist tradition, bear somatic witness to the consistent cognitive dulling and restless sleep that afflicted my own body following residential formaldehyde exposure which averaged 40 ppb higher than Linda’s averred threshold. Further, I conducted my tests by taking air samples and mailing them to my collaborating lab in Michigan for analysis. The two-week lag-time between exposure and results preempted a synchronous understanding of my own symptoms and the concentration of formaldehyde in the air. My own sensory exposure experiences will be discussed in the final section of this chapter.

As with any tool's skilled use, it is only when we "make them extensions of our own body, that we amplify the powers of our body and shift outwards the points at which we make contact with the world outside" (Tsoukas 2003: 417, summarizing Polanyi 1962: 59; 1969: 148; Polanyi and Prosch, 1975: 37). A tool is a means of conveyance that the body acts through and is enlarged by. Linda amplifies the perceptual power of her physiology by attuning her body to both her instrumentation and the indoor air.

### **Gendering Technoaesthetics**

Writing on an antithetical technoaesthetic encounter—the first detonations of nuclear weapons in the deserts of New Mexico—Joseph Masco observed that "the weapon scientist's body [was] the most important register of the power of the bomb" (Masco 2004: 4). The irradiation, shock wave, and ensuing firestorm of human kind's most lethal weaponry evoked reverence and bodily fear in onlooking male scientists as some were knocked to the ground, flash blinded or felt the blast bore into their being. For weapons scientists, the modest or ephemeral bodily traumas of the bomb's destructive might were, in a slightly masochistic fashion, the pleasures of a successful experiment. In the shadow of the world's first mushroom cloud, Masco posits, these bittersweet affects melted into a "nuclear sublime" (Ferguson 1984, Gusterson 1998, Masco 2004). This highly specific version of the sublime propelled some scientists into nuclear disarmament campaigns while others reveled in a feeling that approached divinity (Masco 2006).

"Sublime" is not simply an adjective or noun denoting a characteristic or state of grandeur or awe. In chemistry, sublime is also a verb, invoked when substances transform from a solid directly to a gas—bypassing the intermediate liquid form.

Formaldehyde used in the fabrication of pressed woods, for instance, slowly sublimates at room temperature. In contrast to the brutal and lightning-fast sensorial pummeling that afflicted early male nuclear weapons scientists, Linda's chemical awareness operated at the sedate speed of formaldehyde off-gassing.

The constituent affects of what could be summarized as the “chemical sublime” were often subtle and crept into her consciousness at a snail's pace. Linda's experience of the cognitive force of her discovery was not “directly proportional to the danger involved in the experiential event” as Masco (2004: 351) avers, following Kant's insinuation (1986). Formaldehyde's presence in domestic space was not signaled by overwhelming sensory stimuli but rather indicated by a thickening veil of indistinction as perceptual faculties were occluded.<sup>139</sup> Sensorial noise was the signal of toxic indoor atmospheres.

The magnitude of the issue of domestic chemical exposure was revealed in a piecemeal fashion--gleaned from the repeated toxic encounters of an attuned body and not a singular spectacular event like a mushroom cloud erupting into the stratosphere and tossing scientists to the ground. For Linda, the prevalence of elevated formaldehyde gradually accumulated into a technical and embodied awareness of residential chemical exposure that dwarfed her by its scale. *Within a few weeks I came to realize that there was a problem here. There is a huge problem here.* The form of the chemical sublime brings into relief the gendered assumptions undergirding Masco and Kant's privileging of sublimity's correlation with public, spectacular, and violent events over the profundity of widespread private, indistinct, chronic, and fragmented phenomena (*cf* Debord 1984 [1967]).<sup>140</sup>

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<sup>139</sup> Steve Goodman (2010) has similarly contrasted the overt violence of sonic events like sonic booms to more creeping and pervasive violence of everyday auras—like electromagnetic environs or unheard frequencies that exert an affective grip.

<sup>140</sup> Interestingly, as the possibility of marriage became more distant for Kant in his personal life, he

The velocity of the explosive “nuclear sublime” is diametrically opposed to that of the mundane chemical sublime, yet they maintain a common substrate of experience—the bodies of scientist witnesses. Linda’s body was a vital register of both the chemicals that suffused domestic space and their specific concentration. The chemical process of sublimation, the elevation of state from solid to vapor, is mirrored by Linda’s somatic process of epistemic elevation, of corporeally validating her clients’ symptoms and heightening her bodily knowledge. The chemical sublime is a scale of chemical awareness formed through accumulations of bodily reasoning that brings into relief not only one’s immediate environment but an aspect of the social topology of exposure.

As Linda mapped out her clients’ ailments and formaldehyde readings in a spreadsheet, which she verbally annotated with her own symptoms, she began to piece together patterns of exposure that extended beyond a single individual’s experience. This is akin to the techniques used by female office workers suffering from ‘sick building syndrome’ in the 1960s and 1970s. Attempts to legitimize chemical occupational health hazards revolved around surveys and ‘consciousness raising’ campaigns that aimed to amass “seemingly idiosyncratic personal events and emotions” into statistical events (Murphy 2006: 62). These feminist practices deemed the aggregation of individual experience a more truthful empirical practice than established (etic) techniques of exposure assessment that would systematically disqualify their claims. Linda’s approach bridges authoritative technoscientific practice with the historically feminized apprehension of indoor air quality related illness.

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penned some of his most disparaging musings on femininity in his essay “Remarks in the Observations on the Feeling of Beauty and the Sublime” (Kant 2011: xxxiv). On gender and nuclear weapons see references in Masco 2004: n26. For another atomic portmanteau, “technostrategics” or the hyper-masculinist means of description used by defense intellectuals, see Cohn 1987.

Linda's body and instrumentation logged formaldehyde levels well in excess of government recommended thresholds. Yet, her findings hardly traversed prevailing thresholds of eventfulness. Her chemical sublime did not conform to dominant forms of grandeur or the extraordinary, yet she still felt its visceral pull. Addressing similar means of slow and corrosive morbidity, Elizabeth Povinelli has remarked on "how difficult it is to experience the ethical call of events that do not strike us as catastrophic or sublime" (Povinelli 2011: 152). Linda illuminates the way in which atmospheric attunements, or even affects more generally, pose an alterative schema of eventfulness. The chemical sublime triggered her ethical call to act.

Linda approached the city council of San Jose, California in the Summer of 2009 as they were on the verge of passing a building ordinance requiring new homes to be certified as "green" by sealing them more tightly, a measure which would likely result in higher domestic formaldehyde levels. Linda proposed an addendum requiring green homes to be tested and meet indoor air quality standards. She offered to render those services for free to demonstrate she held no financial conflicts of interest. Her proposal was met by a smear campaign lead by the Formaldehyde Council, an industry-funded interest group, which financed scientific attacks on her findings. Her data were then ignored and her motion scrapped. Although her attempt to effect change ends as might be expected, the way it began is a less recited story. A story that empirically supports Brian Massumi's assertion that the force of accumulated affect "reinjects unpredictability into context, re-making [the situation] eventful" (Massumi 2002: 220). The chemical surreal of Chapter 4, with its injections of otherness, facilitates the affective apprehension of the chemical sublime—a form of event-making that can attend to the de-centralized crises of the contemporary moment.<sup>141</sup>

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<sup>141</sup> Povinelli has made similar observations about the emergence of alternative social projects in

## Bodies of Evidence

The chemically aware body is not only borne out of profession and curiosity as is Linda Kincaid's case in California. It is also borne of necessity, as with Nancy Shoemaker, whom I met in Nebraska and who suffers from multiple chemical sensitivity (MCS). I came to know Nancy by way of another small-town Nebraska woman named Harriet McFeely. Harriet and her husband live in a modular home on the outskirts of a small town. In the spring of 2011 I traveled up from New Orleans to speak with Harriet, who claims to have endured over two decades of domestic formaldehyde exposure. Although she did not live in a FEMA trailer, she only came to identify the likely chemical catalyst of her, her husband, and their dogs' symptoms as a result of news of the FEMA trailer formaldehyde controversy.

Before Harriet got access to free formaldehyde tests from the Sierra Club, and before formaldehyde had been introduced to her as a possible perpetrator, Harriet was near the end of her rope. Over the course of 20 years of inhabitation, she had slowly developed constant diarrhea, runny nose, fatigue, severe eye irritation, double (occasionally triple) vision, the ability to read only with one eye shut, headaches, a sense of taste that skewed towards metallic or simply 'strange,' and numerous other symptoms.<sup>142</sup> With a resurgent exasperation she recounted:

The dogs were getting sick, they were dying one after the other and our health was going downhill and downhill and you know if you go to a doctor [...] they were giving me the implication like I'm a hypochondriac. [...] they couldn't find out what's wrong in my body so they thought I was crazy. That's the only answer.

She first began suspecting the house as the source of the illnesses of her family at

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general, "the potentiality of living otherwise emerges from the differential capture and distribution of embodied and exposed life in late liberalism" (2011: 110).

<sup>142</sup> Her husband Dick suffered from eye irritation, a loss of his sense of smell and taste, and numerous other symptoms shared with Harriet.

Bowser



From this ↑  
to this →

↑  
Grand Mal  
↓ Seizure



Very Confused →  
Dead February 15, 2008

Figure 6.1 Photos of Bowser the dog. A sample page from records kept by Harriett.

large in 2002, when she left the house for five days and her vision cleared and other symptoms subsided. Again in 2007 she left the house for three days and her ailments abated. She ruled out radon exposure, carbon dioxide, sewer gas, black mold, and water contamination.<sup>143</sup> Her last ditch attempt to ascertain the etiology of her family's illness was to invite over a friend of a friend, who was multiple chemical sensitive. Harriet hoped that Nancy, the woman with MCS, would use her chemical susceptibility to divine the source of their health issues. Her divination would not name a specific chemical agent but the general source of exposure.

Despite apprehensions about intentionally entering a potentially contaminated space, Nancy accepted the invitation, primarily because she had heard of the constant seizures of Harriet's dog, and "felt for him." Nancy, who spoke with a delicate and slightly nervous poise, had developed chemical sensitivity at an early age. She attended beauty school during her senior year of high school in small-town Nebraska. Nearly every morning when sterilizing the styling utensils, Nancy would lose consciousness and collapse. She had to drop out and readjust her dream of becoming a beautician, but she did not think much of her 'fainting spells' until years later when she moved down to Florida, where her and her husband took up residency in a trailer. After moving into the trailer her sensitivities dramatically escalated, but not only at home. A whiff of cologne on the street, or shaking hands with someone wearing a transparent Band-Aid could be enough to wilt Nancy to the ground. Her body became jarringly attuned to the vast chemical infusion of the world around her.<sup>144</sup>

"The worst things were pesticides," she remembers, clasping her fingers tightly as her hands perched atop the Jehovah's bible in her lap. In their small town,

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<sup>143</sup> Her Radon levels were negligible. A state employee checked for sewer gas. Black mold was also checked by the state. They have their own well with no nitrates or e. coli, which is also checked by the state annually as they do in-home food preparation for Harriett's wedding catering business.

<sup>144</sup> For an auto-ethnographic account of multiple chemical sensitivity see Chen 2011: 272-275.

they would spray for mosquitoes every Thursday night at 9:30, right when she was getting out of church. Nancy's body tensed as she recounted, bracing herself against the distress of the memory, "it [the insecticide spraying truck] was noisy enough that I could run for cover... but if I get into anything like that, it puts me into something like a semi-coma." As a result of this and similar events, she learned to move through the world with caution. When barefoot at home she would cross sections of linoleum with circumspection, unsure of the daily caprice of her sensitivities.

Her corporeal vulnerability to chemical vapors or direct contact is not spread uniformly throughout her body. As a high frequency exposure site, an extra sensitive area in the center of Nancy's palm became more acutely affected with time. Bred from the necessity of living with chemical sensitivity, Nancy took advantage of the embodied insights of her palm and tacitly honed its reactivity. She used her palm to assess the hazard of the various materials and spaces that she encounters in daily life. Even when not actively detecting chemical threats, her palm would simmer with a slight sensation—signaling its attentiveness to the world. In her words, "It itches. Even now, if I rub there it kind of itches." As she spoke her gaze turned down to her hands and she ran her right index finger in circles around the area on her left hand, "It's just a sensitive spot, period. And if I put something on that sensitive spot or touch something with that sensitive spot I can tell if I can handle it at that time or not."

To manage anxiety about her emergent reactivity, Nancy developed a deeper literacy of the chemical world by way of a deeper literacy of her own body. "I know about formaldehyde and I'd never done anything like [what I did] with Harriet," she explained, "but I knew how formaldehyde affected me." She averred an amassing of somatic knowledge about formaldehyde via years of enduring its effects and affects—

through dozens of fainting spells, bouts of wooziness, enervating weakness, and daily tests of the chemical essence of the material things that populate her world.<sup>145</sup>

It was with the sensitive spot in her hand that Nancy began to assess the chemical constitution of Harriett's home, as an alternative to expensive and inaccessible scientific instrumentation. Sitting in her small and immaculate assisted living apartment, Nancy recounted the process:

And so I went into the different rooms and I tested the carpet and doors. We had a chair there ready just in case and everything and I went into the kitchen and I just grabbed hold to open the cabinet or something. I don't think I touched it very long...

Nancy lost consciousness at that point in the story. She handed over the narration to Harriet who observed Nancy clutch her stomach and let out a groan. The color dropped from Nancy's face as she dropped to the floor and began to seize. Harriett's Boston Terrier, Bowser, ran into the room to investigate the commotion and curled into a fit of seizing as he approached Nancy. The two lay there next to each other on the carpet, gripped by spasms, for a few moments before Harriet and her husband dragged Nancy outside. Bowser continued to convulse in the kitchen. The dog "came to" within an hour but remained disoriented, running into the furniture, walls, and doors.

Nancy gradually regained her composure over the course of half an hour. After she felt well enough, Nancy went on her way, satisfied that she had found at least one source of the McFeely's suffering. As unnerving as the experience was, Harriett was also relieved that Nancy had validated her suspicion that chemicals were quietly emanating from her home. With an affirmative nod Harriet emphasized the

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<sup>145</sup> This iterative process of training the body to become a 'measuring instrument' of chemical essences is similar to the processes of perfume fragrance assessment as documented by Muniesa & Trébuchet-Breitwiller (2010: 328).

instrumentality and accuracy of Nancy's body, "in my opinion that lady is like a human Geiger counter."

In domestic chemical exposures, bodies are both the means of apprehension and the site of damage. Bodies uncover invisible toxins with their wounding. Humans and



**Figure 6.2** The McFeely's current dog at the site of Nancy's seizure. Hastings Nebraska, 25 April 2011.

their animal companions serve as their own canaries in the unwitting coalmines of residential America. Nancy's consultation gave Harriet enough confidence in her claim to ask a local chemistry professor about what might be the specific chemical culprit. "It is just like the FEMA trailers" he suggested. Their vet seconded the possibility. "After doing lots of internet research," Harriett related with relief, "I became convinced that we did have formaldehyde. We were tested—and Bingo!" A formaldehyde self-test revealed a level of 0.0192 PPM in her home. "That is

considered low. But not to me—if you live in it 24-hours a day, 7 days a week for 20 years,” Harriet commented, rebuking conventional acceptable exposure thresholds based on occupational studies and 40-hour-per-week exposures (See Chapter 2). “I think we have found the source of all our problems,” she continued. A month after Nancy’s visit, Harriet’s fifth dog in 20 years had to be put to sleep after he became wracked with near constant seizures.

Her dog’s body was still warm when Harriet turned to the vet and declared, “I want an autopsy on this dog.” Holding back her emotions, she focused on the possible revelatory power of her canine companion’s body, she continued, “I don’t care if you have to chop him up in a thousand pieces. I want to know about this dog.” In Harriet’s view, the pursuit of knowledge overrode the sanctity of her animal companion’s body. The corpse was shipped to the University of Nebraska at Lincoln for inspection. A few days later a sympathetic vet called Harriet at home, “Ya know, Harriet, when dogs get really old they are going to die.” Confused, Harriett paused, “You know what, I understand that... except that one thing, the dog had just had his birthday the week before and he was seven years old.” “SEVEN?” the vet responded with astonishment. Upon inspection, he had estimated the dog’s age as at least twice that and found, in Harriett’s words, damage to “every single organ in his body.”<sup>146</sup> The accelerated aging of her dogs convinced Harriett that her husband was simply explaining away their ailments when he attributed their symptoms to old age. Yet she did not understand this to be a difference of gender but rather one of “personality.”

If Nancy’s ephemeral incapacitation signaled a possible chemical hazard emanating from Harriett’s home, the near liquefaction of her dog’s internal organs

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<sup>146</sup> In the autopsy dated 4 April 2008, J N Henningson, DMV, wrote in his comment: “Extramedullary hematopoiesis observed in spleen should not be seen in this age of dog. Regenerative nodules in the liver are common in all dogs. The hemorrhagic pneumonia is severe. [...] The hemorrhage in liver, lung and brain most likely led to the demise of the animal.”

indicated the degradation of her own body. Nancy's body functioned as the brief visit of an industrial hygienist, diagnosing the sources of poor indoor air quality, while the body of Harriet's dog served as a toxicological test case, one that had endured an exposure duration more similar to her own.<sup>147</sup> As Harriet wrote in a 20-page compendium of her, herfamily, and her dogs' symptoms "I said to my husband, 'If we have something here that is causing Nancy and Bowser to react so violently, then what in the heck is it doing to us?' That was a major turning point for me—I HAD TO FIND OUT...WHAT IS WRONG WITH THIS HOUSE????"

Like Linda, Harriett felt the pull of the chemical sublime. She felt the attrition in her own body and monitored the ailments of her dogs' and her husband's bodies. But she further wished to understand the systemic nature of such exposures. Harriett wrote letters to the editors of newspapers in five or six nearby towns. Her short letters, published in 2008, read: "Modular home owners, have you had any health problems? Have your indoor pets had any mysterious illnesses? Please write or call me." Phone calls began rolling in, one after another. Harriett began to systematically survey respondents. She asked those who called her how long they had been living in their home and what their symptoms were. She surveyed 30 individuals from 13 different households across Nebraska. Respondents supplied 32 different symptoms that they perceived to be correlated to the occupation of their modular home, ranging from unusual thirst to cancer. Harriett further inquired about indoor pet health and recorded the symptomatology of 15 animals across 7 households. She was able to garner funds for formaldehyde test kits from the Sierra Club and tested respondents' homes. Seven of the thirteen homes tested had levels of formaldehyde in excess of the WHO's

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<sup>147</sup> It is worth noting in passing the affinity made between female bodies and animal bodies here, which have in other circumstances also been collectively viewed as transparent receptors or anticipatory bodies (Shukin 2009). The bodily subjectivity of domestic chemical exposure is tempered by both gender differences and species distinctions.

maximum recommended exposure for one hour—0.081 parts per million.

Harriett will mail copies of her data, adorned with a row of skulls and cross bones along the spreadsheet's bottom border, to anyone who may be able to help. She garners small blips of attention, but nothing sustained. For instance, during my stay on her couch, the local media featured Harriett's predicament on the 10 o'clock news program. The two-minute segment represented the apex of recognition for her durative suffering.

During my visit to Hastings, Harriet made her husband promise that a thorough autopsy would be performed upon her, if she were to "drop dead" before him. Shifting her stone-faced gaze over to me, she asserted with certainty that the decomposition of their dogs' bodies served as a herald of her and her husband's future, "I would bet you a hundred thousand dollars that if they did an autopsy on us today, I would bet money that it is exactly like the dogs'." Harriet implies that their domestic exposures had reduced her and her husband to the walking-dead, that a postmortem examination could rightfully be performed on them at any time. A grim suggestion, but one that is representative of many of the persevering residents of potentially chemically contaminated homes.

## **Living Death**

As evinced by Harriett's perceived imminent autopsy, sustained chemical exposures beckon death but also render death ambiguous. Yet, coming to corporeally comprehend one's environment is not always as severe as Harriett's case. As documented in previous chapters, FEMA trailer inhabitants gradually became aware of



**Figure 6.3** Harriett and the author in Hastings Nebraska, on KHASTV, April 24, 2011.

minor departures from their normal sense of taste, sense of balance, clarity of thought, memory, durability of skin, or frequency of contracting colds. Occasionally, inhabitants did not claim even the slightest deviation from their typical physical state. They only recognized atmospheric irritation as an altogether indistinct feeling, as one North Dakota inhabitant noted, “Something about the air in here doesn’t seem quite right.” Or as a woman living in a FEMA mobile home on a reservation in Washington State observed, “in the middle of the day it gets weird air and I open the doors.” While slightly sub-optimal health or simply off-putting auras were predominant among my research participants, many suffered from more debilitating illnesses.

The feeling of living death seeped into the margins of life for those with even minimal symptoms. For example, after I spent three days with a woman living in a resold FEMA trailer outside Oklahoma City in the spring of 2012, she offhandedly mentioned that she was working on a horror novel. We sat in lawn chairs next to her

trailer, where we overlooked the highway and shared an orange. “Well, it's not your usual blood, guts, and mayhem zombie novel,” she corrected herself, “Ya see, after the government releases some chemicals, everyone turns into a zombie.” She laughed. I laughed too, assuming the book is a means of catharsis for the “chemical anxiety” (Auyero and Swistun 2009) she had been recounting to me for months over the phone and in person for several days.

“That’s a pretty accurate way of putting it,” I said with a nod, “I usually feel a bit zombie-like after just an hour in a FEMA trailer.” A puzzled look folded across her brow. She released the look a few seconds later as she burst into laughter again, “you know I never put that together... but I only got started writing it when I moved in here [she contemptuously gestures at the trailer we rest our heads against] and started researching all this formaldehyde business...They say, ‘write what you know.’”<sup>148</sup> We both laugh. Her symptoms—memory loss, cloudiness, fatigue, and respiratory irritation—left her feeling detached from the world of the living. *write what you know*. Her bodily knowledge of exposure brought her imaginatively closer to worlds of conspiratorial government malfeasance and zombies. Yet her symptoms were not severe or proximate enough for her to immediately recognize the afflictions of her novel as derived from her own. She remained close enough to the common pace of shared human experience, that realizing the zombie-like nature of her condition was infused with humor.

For those with more severe symptoms, death loomed larger. Both Mac and Lizzie, introduced in Chapter 3, expressed the apprehensions of the living dead. “I could already be dead right now from cancer and not know it,” Mac, a cadaverous

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<sup>148</sup> The appearance of zombie narratives, first encountered in Hatian folklore as parables of the woes of industrial capitalistic and colonial exploitation, can generally be read as indicators of environmental, economic and scientific anxiety (Dendle 2007). The resonances of zombie as colonial critique are especially poignant as this woman is of Cherokee descent and tribal nations across the US were a major recipient of refuse FEMA trailers.

former FEMA trailer inhabitant, fretted in his New Orleans hospital bed in early spring of 2012. The uncertainties of ‘low-level’ exposure toxicity breached the divide between life and death, yielding an abstruse form of death that could cohabit Mac’s body even as he lived.

Similarly, Lizzie, the mother of three children who developed illnesses in their Mississippi FEMA trailer, had relinquished any hope of knowing the etiology of her children’s illnesses, “there is not going to be an answer. I never will know for sure anything because...because they couldn’t do an autopsy.”<sup>149</sup> In silence, we both looked across the room to her five-year-old son, Rhett, who sat motionless in a car seat. His sightless eyes pointed to the ceiling. His limbs, which were not under his control, lay limp, and a nasal cannula curled across his lip, supplementing his oxygen supply. Rhett was pronounced dead for nearly half an hour before being brought back to life by an impassioned ER doctor. *they couldn’t do an autopsy* For a brief period, Rhett did meet the criteria for an autopsy, in which, Lizzie reasoned, his body would have revealed the true cause of his death. His illnesses now stem from the anoxic brain traumas of having died, rather than what originally killed him, and the epistemic and revelatory power of his body continues to ebb over time.

Rhett remains, in a way, undead—having returned from death and now encamped on the slope between having life and passing on. In the desolate landscape of grave and protracted environmental illness it feels, at times, like bodies are all there is: sick bodies, knowing bodies, bodies of evidence, bodies to be saved.

## The Perspicacity of Haze

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<sup>149</sup> The repeated calls for autopsy mark a crossroads between corporal awareness of the effects of exposure and the need for expert modes of authentication. Despite their faith in their own bodily knowledge, my informants were well aware that scientific vision was the ultimate arbiter of causality and necessary for institutionalized means of adjudication, if they were indeed interested in pursuing such means of arbitration.

Much of this ethnography was conducted through the haze of indoor air quality induced befuddlement. Over the course of the first hour spent in most FEMA trailers, I would slowly develop an ache in the back of my eyes, which would with time, spread throughout my skull. My internal annotations of my participant observation would slow. Time and the flow of my thoughts became viscous. My energy would bottom out but my eventual sleep was wracked with restlessness—compounding my daze during extended trips.

The spaces to which I was supposed to be most attuned were the spaces in which I was most cognitively unhinged. As I met with informants in their FEMA trailer homes, I repeatedly found myself struggling to resist a physical desire to expedite interviews as, time and time again, my mind felt increasingly woolly, my focus slipped and my lines of inquiry lost their direction in a light but persistent mind-fog.<sup>150</sup> A preoccupation with my own discomfort may have occluded a wide variety of ethnographic insights, but more fundamentally it concretized a shared biological susceptibility and the radical empirical base of this chapter. This brief section outlines my epistemological rationale for taking such awarenesses to biological aberrations seriously, be they my informants' or my own.

In the above accounts, the perceptual interference of air-quality induced illness is received as a phenomenological transmission of its own right, drawing on Kim Fortun's praise of and further call for ethnographic methods that bear an "openness to what cannot be explained and to the possibility that what was once thought to be noise

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<sup>150</sup> I never felt these sensations when I sat chatting with informants outside in folding chairs, on walks, or in cars, office buildings or fast-food restaurants. Additionally, photographers, and journalists that I brought to meet my informants also developed similar symptoms. Even though I found elevated formaldehyde levels in all of the homes I tested, I cannot rule out the possibility of other agents in the indoor air of these trailers, such as volatile organic chemicals or mold toxins.

can be understood as signal” (Fortun 2003:186). The sensorial ‘noise’ of illness is part of the ‘signal’ of domestic chemical exposure and the body-work employed to apprehend indoor air quality.<sup>151</sup> As Donna Haraway affirms, “Ethnography [...] is a method of being at risk in the face of practices and discourses into which one inquires” (Haraway 1997: 190). Opening myself up to and embodying the chemical risks of the exposures I study was methodologically essential. In addition to being practically unavoidable while undertaking this research, being exposed is a way of materializing an experiential glimpse at the long-term exposures of my informants and a means of embodied accountability to their stories.

Such exposures charged my fieldwork with a corporeal awareness of the costs of apprehending exposures. Michael D. Jackson avers that an appreciation of the stakes of cognizance is foundational to phenomenological research, “knowledge is not a matter of how to know but a matter of life or death, when something is hazarded in the process of coming to know” (Jackson 1996: 4). In the FEMA trailers, the epistemic device of knowing exposure and injury itself are one and the same. My repeated, yet ephemeral, impairments empirically buttress the structuring of this chapter around the simultaneously mundane and extraordinary bodily apprehension of indoor air quality. My mention of my own exposure affects is both to bear somatic witness to a diminutive form of my informants’ afflictions and to situate this chapter within the literature on ‘radical empirical’ method (Jackson 1989) and ‘radical participation’ (Goulet 1998, Nadasdy 2007), which seek to use the experiences of ethnographers as a means of corroborating the experiences of informants that would likely be dismissed as illegitimate by dominant means of authenticating knowledge.

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<sup>151</sup> Indeed, such bouts of hypocognition are all too often anthropologically overlooked as they “tend to resist or defy explicit forms of representation due to their lack of culturally infused conceptual elaboration and because of the fact that they tend not to evoke the same culturally attuned attentional focus” (Throop 2008: 506).

Radical empirical methodology in anthropology is derived from the pragmatist philosopher William James' contention that "any kind of relation experienced must be accounted as 'real' as anything else in the system" (James 2010 [1912]: 26). In other words, the direct particular experience of things and relationships yields a solid truth about the world that does not require the unearthing of hidden explanations to verify or discount them.

The five primary senses did not mediate the elevation of my understanding of exposure from second-hand accounts to first-hand embodied observations. Rather, my exposure awareness was cultivated by more indeterminate "somatic modes of attention" (Csordas 1993) that brought departures from my bodily norm into focus. Illness is a sensory practice, and the primary means of attending to the invisible hazards of indoor air quality.<sup>152</sup>

### **An Intoxicating Aroma**

Newness is something we do not always appreciate, but I am convinced that a large minority of Americans have never owned a new car, though they would like very much to. That is why there are spray cans to produce the smell—whatever it may be—of a new car interior. A new trailer has the same exciting appeal: stickers on the windows, books of instructions, and that indefinable smell of newness.

—J B Jackson (1994: 61)

When Lizzie moved into her FEMA trailer in 2006 after Hurricane Katrina splintered her home, she was ecstatic. The small emergency housing unit had a wall panel that slid out to considerably increase the floor space, it looked new, but what sealed the deal was its smell, "I love the new car smell—why, everybody does that has air fresheners, they smell like that ya know. And that's what it smelled like to me.

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<sup>152</sup> My intellectual somatic concentration and a bevy of environmental allergies facilitated my appreciation of my own exposure affects in a way that defies the gendered slant of my argument.

And I was like, ‘YAY!! They brought us a brand spanking new one!!’ I thought they would bring us an old ratty one, ya know?” The trailer’s appearance of newness, and therefore its quality, was first observed visually but authenticated by its scent.

Many FEMA trailer inhabitants that positively noted the chemical aroma conceded that the new car smell itself was not fully enjoyable as it “burned a little,” but for Lizzie, and many other informants, the social currency of the smell overrode the raw nature of its sensory experience. Similar to “the tingle means its working” ad campaign of the dandruff shampoo Denorex in the 1980s, the slight singeing sensation conjured by the chemical brew<sup>153</sup> known as ‘the new car smell’ signals a modern genre of functionality and it is the primary idiom through which an awareness to indoor air was expressed.

The highly valued ‘new car smell’ or simply the ‘new smell’ is the most pervasive aspect of the chemical sensoria explicated in this chapter. Ethnographies of exposure often cite olfaction as the primary sense of chemical detection, yet the new car smell—the foremost mentioned smell of my research participants—is a scent-concept produced by chemical contamination but associated with the exchange value of a commodity as a whole. In contrast to the presence of otherwise insensible chemicals revealed by mindful bodies, the “new car smell” is an appropriated sensorial awareness to potentially harmful exposures, which imbues such exposures with pleasure, fashioning the aroma as a selling point. Borne out of the mid 20th century auto industry, the positivity of the ‘new smell’ is now drawn upon by consumers when purchasing manufactured housing and serves to occlude perception of potentially hazardous chemical exposures.

The following section outlines the historical development of this auto-industry

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<sup>153</sup> See Grabbs et al 2000 for the list of over sixty chemicals identified in four different new vehicles. The total VOC level of one of the cars was two orders of magnitude higher than the outdoor air.

manipulated scent-concept. In contrast to the attritional nature of corporally apprehending domestic chemical exposure, an epistemic practice that came at the cost of illnesses akin to living death, the fetishistic enjoyment of ‘the new smell’ commandeers bodily knowledge of exposure and repackages it as the sensation of freshness. In line with the male voices of chemical disbelief that began this chapter, the new car smell originates in the masculinized space of the automobile and has been produced as cologne to adorn the male body. The new car smell is an aspect of the masculine sensorium that attends to indoor air and bodily sensation, but does so in a commodified and ultimately fetishized way.

The new car smell entered the American sensorial-lexicon in the late 1940s. As WWII came to a close in the mid-1940s, America’s appetite for automobiles soared. During this period the olfactory pleasures of a new car began to percolate through the written record without, yet, coalescing into the scent-concept of the ‘new car smell.’ Car enthusiasts were near feverish by the time surrender documents were signed in Europe and the Pacific, as the war effort had halted the production of civilian passengers cars in February 1942.

A 1945 issue of *Popular Mechanics* predicted that the release of 1946 edition cars would likely be “as exciting to most Americans as the first transatlantic flight.” The magazine located the sensual pleasure of automobile ownership not only in its distinctive smell near the time of purchase but also in the mechanical neighing of its engine, “Americans are extremely eager to hear that musical squeak of a new automobile and to smell the fresh enamel and hot metal.” The giddy prose of the immediate postwar moment, which interpreted the din of mid-century engines as enjoyable, quickly sobered up. A year later, 1946, a motor oil ad in *LIFE* magazine that depicts two men in suits admiring a pristine car reads, “There’s something about

the very smell of a new car that gives you a big thrill.” The ad emphasizes “The clean odor of new upholstery,” and teeters on the idiomatic precipice of the ‘new car smell’ without naming it as such. By 1948 the sent-concept had solidified, as evinced in an advert in the June 11<sup>th</sup> issue of the US News and World Report:

You open a door and sniff that ‘new-car smell’ of fresh lacquer and newly-loomed upholstery. From beneath the gleaming hood a faint whispering speaks eloquently of the torrents of power eagerly waiting to take you anywhere on the map.

The “musical squeaks” of three years previous have been subdued to “faint whispers” while the smells of ‘fresh enamel and hot metal’ that ambiguously spanned the cab, the exterior, and under the hood, crystallized into a nameable sensorial experience specifically within the passenger compartment. The new car smell was groomed into the dominant aesthetic experience of life behind the wheel.

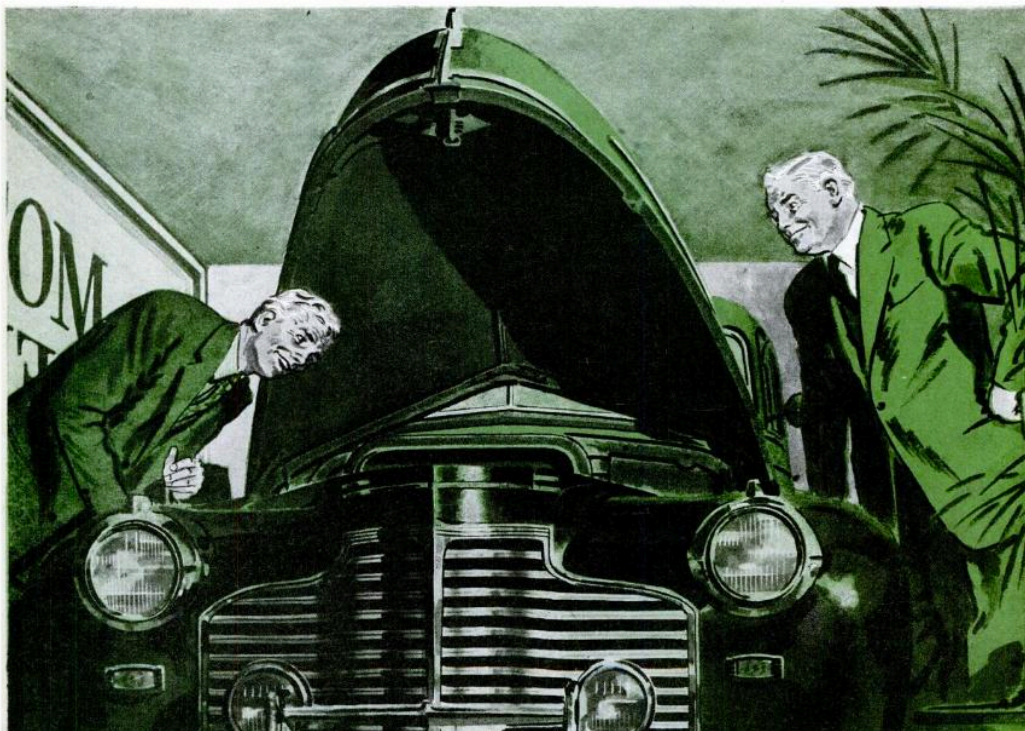
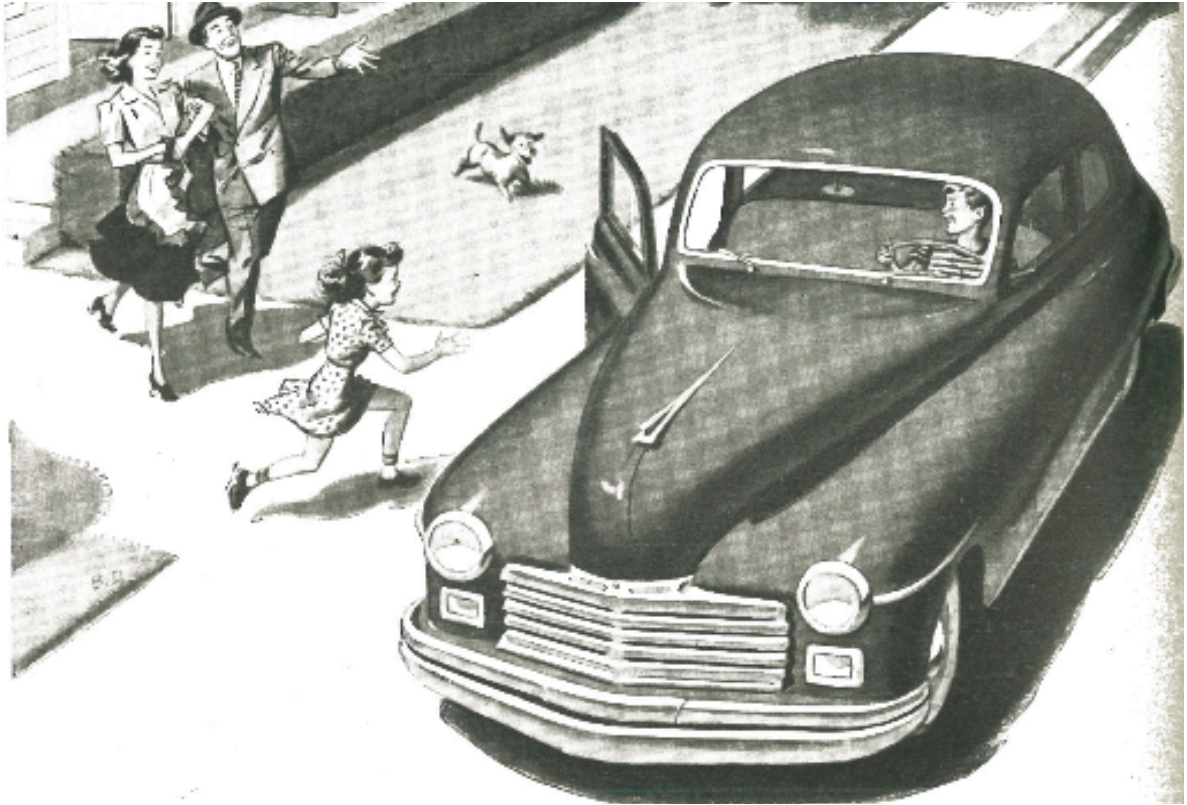


Figure 6.4 Image from a 1946 LIFE Magazine advertisement.



**Figure 6.5 Image from 1948 US News and World Report advertisement.**

The off-gassing from plastics, adhesives, upholstery, and lacquered wood panels passively conditioned the air inside post-WWII cars and constituted a new domain of chemical exposure, which was couched as a unique sensation reserved for the privilege of new car owners and infused with excitement.<sup>154</sup> These heightened spaces of chemical exposure quickly pervaded the United States during the “frenzied” car sales of the 1950s (Offer 1996). Ahead of the curve, auto industry advertisements were largely the first to make mention of the new car smell—associating the miasma with status, style, and freshness.

By the mid-1950s the new car smell had sprung from adverts and made its way into the pages of fiction as it had become a readily known sensorial reality. The main character of a mid-decade suspense novel mentions not just the smell itself but its

<sup>154</sup> The rise of the new car smell in automobiles coincided with the rapid increase in the use of formaldehyde-based engineered woods in home construction to facilitate the post-WWII housing boom (see Chapters 4 & 5).

manipulative use as a means of synthesizing newness, “You know, Gina, in the used car lots when they get a good clean car in, a recent model, they sometimes brush the upholstery with embalming fluid. That gives it a *new car smell*. Psychological salesmanship” (MacDonald 1955: 150). The embalming fluid, presumably formaldehyde, was used to preserve the most fleeting aspects of the car’s aesthetic newness: its aroma. Smell is the ultimate test of time. Even if an automobile is not driven and is kept in pristine condition, the scent of its chemical nascence will slowly fade once it leaves the factory floor.

Over the intervening half century the new car smell gradually moved from being referenced as simply a joyful “free” add-on of a newly purchased automobile to being a stand-in for the act of buying a new car. From headlines of *The New York Times* (Maynard 2009) to YouTube video accounts of driving the latest model off the lot “the new car smell” is synecdochically used to represent the new car in its entirety.<sup>155</sup> Some contemporary adverts label the aroma, “the smell of success.” The fragrance is steeped with so much cultural capital that it became just that, a perfume.

Responding to research that demonstrated the hyperreal (Baudrillard 1995) consumer preference of artificial leather smells to those of real leather, Ford began infusing their cars with their own chemically concocted scent at the turn of the 21<sup>st</sup> Century. Cadillac followed suit with their own scent three years later, which they named Nuance (Lindstrom 2005: 94). Mustang has a brand of cologne available at Walmart. Ford Spain released its own bottled fragrance dubbed, “Olor a Nuevo” (*Smells New*) in the spring of 2012, which was sold individually and infused into their certified pre-owned vehicles. For these used cars, a contract guaranteeing the smell was added the sales documents and classified ads recognized the distinction of these

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<sup>155</sup> One example among many: in April and May of 2007 the advert inserted into the bottom of Yahoo! Emails read, “Ahhh...imagining that irresistible ‘new car’ smell? Check out new cars at Yahoo! Autos.”

used vehicles by re-categorizing them in a novel grouping, “Usados con Olor a Nuevo.”<sup>156</sup>

Throughout the gradual establishment of the new car smell, the majesty of new cars and their aroma was largely reserved for male breadwinners. As a result, automobiles were designed exclusively for the average male body for the majority of the 20th Century. During the 1940s and 1950s, the car increasingly came to symbolize the power and authority of the male body (Bordo 2000: 85-87). The automobile became an extension of the body of its male driver (Urry 2006: 24). Under post-WWII Fordist regimes of accumulation, such a body/car became “inseparable from a specific mode of living and of thinking and feeling life” (Gramsci 1991: 597). The car and its mass production and consumption ushered in “a whole new aesthetic and a comodification of culture” (Harvey 1991: 135) of which the new car smell was a prominent but overlooked feature. As the new car smell became a widely recognized phenomenon near the turn of the century, perfumists closed the associational loop between male bodies and automobiles with the development of new car smell cologne.

While originating in masculinized American space, and largely maintaining a gendered form in its comodification, the scent of a new car is currently admired by both genders, and across the auto-mobile world. The chemical bouquet of the new car smell, first documented in the US in the 1950s is now part of a global sensorial pallet. This olfactory side effect of mass production has become a product in its own right. Spilling into international markets, and branching out past the automobile industry, the hodgepodge of volatile organic chemicals that came to be known as the new car

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<sup>156</sup> The narrator of Ford Spain’s web advert describes the product, “We knew that not everybody could afford a new car but that was no reason to miss out on the excitement. To try to regain that feeling with an ad was hopeless. Our cars were already nearly new... but there was still something missing. So we created a product, a sensation.”

smell has also simply become the scent signifier of newness for a broad range of products.

The new car smell has come home. Repeatedly, FEMA trailer inhabitants would respond to my asking if their home had any particular smells with a thoughtful pause followed by a resolute, “No.” Yet, when further questioned if their used trailer had a “new car smell,” they would quickly respond, in the affirmative. They assumed that by “smell” I meant an out of place or unpleasant scent, a category to which the desirable new smell did not apply. Time and again, the “new smell” was their first observation and primary indicator of the FEMA trailer’s quality as it suggests a newness of essence that transcends mere appearance:

*Its like the new car smell times ten—Michigan*

*Oh, I mentioned the new smell right away—didn’t I  
mom?—Illinois*

*It looked clean and had that new smell.  
I was pretty happily surprised.—Tennessee*

*Most of the trailer smelled new, except for the bedroom  
and bathroom, that kinda had some mustiness.—Florida*  
157

A smell originally tied to the wealth and status of the masculinized space of the car has become a principal means of assessing the exchange value of its product as determined by its age. From cars to carpets, to plywood, to permanent press clothing, to cosmetics, to mobile homes the new smell is a dominant practice of embracing chemical exposure without naming it as such.

The ‘new’ scents of commodities have become commodities in the own right,

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<sup>157</sup> In only one instance did my line of questioning alone provoke a critical appraisal of the smell. An elderly woman in suburban Tennessee, who had bought a FEMA trailer to live in while she saved money to move back home to the Southwest, stopped to think after I asked her why she liked the ‘new smell.’ She thought out loud, “I guess you are supposed to think it’s nice, but it’s just chemicals from the materials used to make it.”

ones that obscure the origins of their production and their material substance. Smells of newness are commodity fetishes. Commodity fetishism derives from the universalizing medium of money, which, Marx avers, eclipses the material relations from which commodities arise. Under capitalism, Marx tells us, the commodity relations between things hide social relations between the human producers and consumers of things. It is through the mediation of money—the ultimate commodity—that the perception of commodities always remains partial, as they are “sensuous things which are at the same time supra-sensible or social” (Marx 1990 [1867]:165). In this way, fixation on the value of a new smell masks the chemical exposure that it also indicates. The smell “transcends sensuousness” (ibid: 163), belying its chemical nature and its molecular effects on the body.

In its more pervasive form—as accidental olfactory addition to synthetic products, rather than as a product of its own—the new smell is not a commodity. In the form that is inhaled with a sense of contentment in FEMA trailers across the country it is an ethereal proxy of the money spent on their home. It is a reassurance that the money invested into the home has not evacuated over time. While not a commodity in the strict sense, the new smell remains a fetish, which conceals its origin and substance.

## **Conclusion**

This chapter has sought to unpack the gendered means by which the bodies are used to mediate understandings of domestic indoor air quality. This line of inquiry seeks to expand the sensorial remit of the phenomenology of environmental illness beyond its present focus on olfaction.

The first section focused on the corporeal attunement of an industrial hygienist

whose body was as vital a register of chemical presence as her formaldehyde meters, complicating the historical division between somatic and scientific knowledge. The minor affects and effects of exposure accumulated, over repeated incidents, into an embodied awareness of the tremendous scale of the issue. I theorized this string of sensations as amounting to a chemical sublime, which I defined in contradistinction to the hyper-masculine and spectacular nuclear sublime.

Linda's fine-tuned sensibilities are the stuff of fiction, you may think. And in a very literal sense, you would be right. Recent novels such as Whitehead's *The Intuitionist* and Gibson's *Pattern Recognition* feature, as Lauren Berlant summarizes, "ordinary women with supersensitive capacities for apprehension" (Berlant 2011: 70). Interestingly, the intimate insights of the central characters of both novels are expressed through the idioms of bodily toxin perception. The protagonist in *The Intuitionist* diagnoses the safety of elevators with an extrasensory perception that discerns hazards as "excreted chemicals, understood by the soul's receptors and translated into true speech" (Whitehead 1999: 87). While that of *Pattern Recognition* is "sensitive" or "allergic" to trite logos and, when exposed, becomes seized by symptoms analogous to multiple chemical sensitivity (Gibson 2004).

Numerous other novels such as James Baldwin's classic *Giovanni's Room* describe the sensations of women's viscera as a means to knowledge, "Behind the counter sat one of those absolutely imitable and indomitable ladies [...] and they know, in the way, apparently, that other people know when they have to go to the bathroom, everything about everyone who enters their domain." (Baldwin 2001: 74) The pervasiveness in fiction does not relegate my informant's experiences to the domain of the unreal but rather speaks to the saturation of perceptual phenomena akin

to that of Linda, Nancy, and my other informants.<sup>158</sup>

Linda's techno-somatic mode of attention is the tip of the iceberg charted in this chapter. Atmospheric attunement was the dominant means of discerning domestic chemicals across all of the exposed people with whom I spoke. Yet, such an apprehension is often occluded or delayed by the highly saturated sensation of the 'new car smell.' Cultural theorist Cynthia Dettelbach asserts, "In America, the automobile shapes—and haunts—the imagination" (1976: 120). The case of the new car smell indicates that the specter of the automobile not only shapes the American imagination but also haunts the American sensorium. While diffuse affects and unnamable senses mediated the sensorial-epistemological awareness to chemical vapors, olfaction of the 'new car smell' obscures such exposures. The scent-concept repackages the large-scale subjugation to potentially harmful chemicals as aesthetic knowledge of the commodity's value, ensuring the new smell's prominent place within modernity's sensoria.

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<sup>158</sup> Further, it is worth noting a recent survey (Wilson 2012) of over 2 million academic publications, which found pollution and occupational health to bear the second highest percentage of women authors—second only to education—demonstrating a strong current of gendered interest within exposure science at large.

## CONCLUSION

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A week before the effervescent revelry of Mardi Gras 2012, federal officials and international media outlets celebrated a tamer, albeit noteworthy, event: the removal of the last FEMA trailer from New Orleans. This final emergency housing unit had spent some six years in the yard of a shy Mid-City woman named Betty Longo. FEMA's press release and subsequent news reports celebrated the withdrawal of the last of these 250-square foot homes as a milestone in the region's dogged return to normalcy. In his triumphant commentary on the occasion, Mayor Mitch Landrieu noted, "FEMA trailers were never meant to be permanent housing units, so I'm glad that our code enforcement efforts coupled with FEMA case work has helped individuals transition to permanent housing" (Muskal 2012). Not mentioned during the fanfare was while the government was towing FEMA trailers out of the city, entrepreneurs were towing trailers back into the city to be legally placed in locations zoned for mobile housing. At least two-dozen FEMA trailers have found their way back into New Orleans to become permanent features of the city's mobile home parks.<sup>159</sup>

Less than a week after the official declaration that New Orleans had rid itself of its last FEMA trailer, I traveled with a photographer, Akasha Rabut, out to a trailer park in one of the least densely populated districts of Orleans Parish. The city was a day away from the climax of carnival season. We drove east from Akasha's Central City apartment, inching through traffic as cars with out-of-state license plates clogged

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<sup>159</sup> Dozens more are perched just outside the city in the mobile home parks of St. Bernard Parish, just past the Lower 9<sup>th</sup> Ward (See Figure 1.4).

the streets, circling the neighborhood in search of parking. As we neared the park, aptly named “Mardi Gras RV Park,” the streets slowly emptied and the frenzied celebration of carnival subsided into the placid stillness of an industrial-cum-suburban neighborhood. The park, nestled between two highways, furnished a variety of housing options: a short row of motel rooms, fifty or so yards of RV lots with electric and septic hook-ups, and a dozen FEMA trailers rented out by the night, week, or month. Their FEMA trailers were painted with geometric patterns and the occasional fleur-de-lis as a modest means of camouflaging these identical and infamous units into the miscellany of trailers residing in the park.



**Figure C.1 ‘Camouflaged’ FEMA trailers in the Mardi Gras RV Park, New Orleans, February 2012. Photo by Akasha Rabut.**

No one was outside except a young girl who continuously circled the park on her mountain bike. I could faintly hear running water and the intermittent thuds of someone making do in the cramped space of a FEMA trailer shower. I spoke with an RV owner from Canada, visiting for carnival. He told me Saskatchewan was littered

in former FEMA trailers. Akasha introduced herself to a man who was watching her through his trailer window. He was a middle-aged construction worker from Arkansas who had lived in his FEMA trailer for over a year, during which time he had developed a number of skin irritations. He had no phone. His Tommy Hilfiger T-shirt was beyond threadbare. We made plans for me to return and test his trailer.

I briefly considered renting out a trailer for the night, as one of my supervisors had suggested that I spend at least one night within my object of study. I peered into a visibly unoccupied unit. Through the rear window all I could see was the lower of the two child's bunks. A dried stream of blood snaked down from the head of the bed into a small pool near the center of the mattress. It was likely the residue of a long slow nosebleed. The length and width of the dark red stain suggested that the flow was slight but persistent. The blood appeared to have escaped for much of the night without rousing the child from sleep. Such was the velocity of wounding experienced by FEMA trailer residents: durative and subtle enough to go unnoticed for long stretches of time. If anything, nosebleeds are among the more eventful manifestations of harm spurred by compromised indoor air. More often than not such exposures drive gradual enervation and a warping of expected material and biotic functioning rather than overt hemorrhaging or breakdown; more surreal and exhausting than directly lethal.

The blood that had seeped onto the nylon surface of this FEMA trailer mattress could have been from a child displaced in 2005 or it could have been shed only days prior by a more recent inhabitant. In this parting vignette the spaces of both original governmental deployment and market-mediated resale overlap and do so at a time heralded as the end of New Orleans' entanglement with these emergency shelters. FEMA had held their terminal media event and indistinct, uneventful harm

rolled on. I sent Akasha's photos of FEMA trailers within Orleans Parish to both local



**Figure C.2 Blood on child's bunk flowing from bottom left. Mardi Gras RV Park, New Orleans, February 2012. Photo by Akasha Rabut.**

and national news agencies in the hopes of bringing some attention to the ways these emergency housing units continue to patch the holes of American housing crises. I received no replies.

FEMA trailers continue to circulate. New inquiries from FEMA trailer inhabitants in Kansas, Pennsylvania, North Dakota, Maryland, Virginia, and Texas still fill my inbox as I send this thesis to the printers. For many of the original FEMA trailer inhabitants, the toxic residues of exposure persist. Long after the federal government reclaimed its emergency housing units, some former FEMA trailer residents feel chemically sensitized and easily set off balance by chance chemical encounters. Others endure more unrelenting effects. Both of Mac and Rhett, introduced in Chapter 3, have succumbed to their illnesses. Rhett's lungs collapsed

the final time in late 2012. Mac passed away peacefully in the late summer of 2013.

As I finalize this conclusion, settlement checks related to the FEMA trailer product liability lawsuit were being delivered. Debra Coleman of the Gentilly neighborhood received her settlement check of \$32.02 in early November, 2013. She received another check for the same amount a week later. Her second check was made out to Debra McDonald. Her husband, Clarence Coleman, also received two checks—the second one made out to Clarence McDaniel. A dozen friends of the Colemans also received second checks bearing an incorrect last name. Apprehensions abounded that such checks were part of a fake check scam designed to illicit sensitive information from recipients. The Better Business Bureau urged those who received duplicate checks to call FEMA directly to report and correct errors (Truong 2013).

There are two telling slippages in the reception of this legal-monetary resolution. First, the very substance of redress, justice, and the rights of citizenship—the settlement checks—were suspected of being agents of fraud. That the process of recompense for biological damage and social suffering is indistinguishable from a systematic swindle is revealing of status of tort law in the United States and the expectations of those that resort to multidistrict litigation (see Chapter 3). These suspicions of the insidiousness of mundane things is part and parcel of the surreality and insecurity of FEMA trailer life that trained inhabitants to monitor the present for imminent irruptions of toxicity—especially when engaged with mechanisms of aid or assistance.

Secondly, the Better Business Bureau assumed that FEMA was the party responsible for administering redress for harms resulting from the inhabitation of FEMA trailers. This is a seemingly straightforward connection. Yet, early court proceedings upheld the federal government's sovereign immunity and released the

agency from any FEMA trailer liability years before a settlement was reached. If the skepticism of the Colemans is indicative of a disposition cultivated by the FEMA trailers and economies of abandonment more generally, the assumption of governmental culpability on the part of the Better Business Bureau is indicative of how outmoded biopolitical regimes continue to inform our reading of the contemporary.

Similarly, on multiple occasions FEMA trailer residents would—after discussing in detail my university based research and reading consent forms adorned with my university's logo—introduce me to neighbors, friends, or colleagues as a federal government investigator. The institutional context to which they felt I *should* belong, or was perhaps easier to conceptualize and relay, overwrote the actual status of my research. As I explained to an elderly mobile home park owner in Texas that I did not in fact work for the government, she launched into waxing about the early days of the mobile home industry. She recollected a specific incident in the mid-20th Century, wherein governmental agents drove out to her park to replace defective piping in certain mobile homes. This residual optimism of FEMA trailer residents, mobile home park owners, and the Better Business Bureau in regard to the entitlements of citizenship is what Lauren Berlant would call a “normativity hangover” (Berlant 2007: 286). In these final moments of legal and monetary closure, nostalgic forms of normativity are coextensive with long-emerging suspicions. Worries about being *made or let die* shared space with bygone imaginaries of *make live*.

These seemingly binary impulses of biopolitics can be seen leaking into one another from the outset of the FEMA trailer deployment and such indistinction extends beyond the emergency housing unit at the center of this thesis. Just as *make*

*live and make die* cohabit within shelters that cultivate morbidity, a larger take-away from this thesis is that cohabiting with inorganic and potentially toxic chemicals almost amounts to a tacit American pastime. Formaldehyde, as a constituent of the ‘new smell,’ is a highly valued component of both automotive and domestic space. The chemical is at times inhaled with enjoyment. Even when its domestic concentration falls below olfactory thresholds it is virtually always present in the air of American homes at levels that can cause health effects or irritation to the chronically exposed (Offerman 2009, CA OEHHA 2001, ATSDR 1999). “Pastime” has a secondary valence of applicability as dwelling with toxics, for many, generates feelings of an accelerated passage of time and weathering of their body.

Within the American landscape of domestic chemical exposure, the FEMA trailers, with their appreciably elevated formaldehyde levels, occupy a unique and possibly bellwether position. The FEMA trailers are, as absurd as it sounds, more eventful instances of domestic chemical corrosion and wounding than the relatively lower level, but ubiquitous, exposures of conventional homes. Yet, as discussed in Chapter 2, even if public attention were to take up an interest in the modest harms of mainstream formaldehyde exposures, prevailing scientific practices are yet to capacitate the validation of low-level, long-term, and individually variable harm. The incomprehension of chronic and indistinct wounding is caught up in the standards of evidenced-based biomedicine and how law takes up these discourses or enacts them in the courtroom.

In addition to temporal and scientific speed bumps to recognition, architecture and space are also implicated in the uneventful nature of illnesses that arose during FEMA trailer inhabitation. The circumscribed space of the FEMA trailer atomized my fieldsite. Never did I speak with a group larger than two residents from different

households. This was not only because hundreds of miles often separated one resold FEMA trailer from the next. Despite nearly identical origins of mass-produced exposure, the ambient formaldehyde exuded by these units did not derive, strictly speaking, from the same source. Each household was stricken by their own individual and private manifestation of exposure and not an external point source that flows through common airspace—the likes of which ignite most atmospheric environmental justice projects. With the FEMA trailers, toxins did not enter the home from unmistakable outside industry but rather emanated from the unseen formaldehyde-based setting agents that give form to domestic space. The very substance that structurally holds the home together also facilitates the biological unraveling of its inhabitants.

As feminist legal scholars have noted in the context of domestic violence (*cf* Suk 2007), the reach of American law has traditionally faltered when asked to cross the threshold of the home.<sup>160</sup> Indeed, domestic space, as the ultimate bastion of privacy and autonomy, is among the only unregulated airspace in the US. Within the space of contaminated housing units, the non-infectious wounding of chemical exposure does not threaten the middle class like the viral specters of cottage industry poultry in Vietnam (Porter 2013) or industrially produced pigs in Oklahoma (Blanchette 2013). Rather, the mobility of these mobile homes—and their hazards—remains locked within circuits of crisis that regularly fail to crest threshold of eventfulness. The mechanisms of redistributing the FEMA trailers to loci of precarity across North America sheds light on both the dispossessionary logics of capitalism and the intimately related geography of life and slow death.

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<sup>160</sup> This juxtaposition of domestic chemical violence and domestic interpersonal violence begs the question: what can the former learn from the latter? Can the increased use of protection orders by the domestically abused, which serve as *de facto* injunctions against the cohabitation with potential aggressors, be employed by the domestically exposed? Can presence of a known carcinogen in the home take a page from these legal maneuvers that take presence in the home as a proxy for violence?

The over 120,000 resold FEMA trailers that have become engrained features of the American housing markets are characterized by low-level exposures, durative exposures, exposures of those already in crisis or destitution, spatially dispersed exposures, exposures that are un-known by a constellation of material and discursive practices, exposures that bear alluring aromas that are actively sought out, and illnesses that manifest sub-clinically and in individually varied ways. A major contribution of this work is disentangling the multiple constituents of uneventful harm: from the built environment and pharmaceutically influenced disease concepts to dispersed geography, late liberal subjectivity, law, and aesthetics. The filaments of this study innervate a large number of spaces, institutions, and histories. Consequently, the implications of this research overflow the remit of FEMA trailers and domestic air to illuminate the dreamworlds, materials, and economies mired in the chronic crises of the contemporary United States.

To attend to an always-receding object of study I have drawn affect theory and affective writing into an ethnography of environmental health, a territory where prose often leans towards the clinical observations of the health sciences. Incorporating the insights of scholars like Elizabeth Povinelli, Kathleen Stewart, and Lauren Berlant forced me to grapple with ephemeral and almost indiscernible phenomena in a way that accounts for individual sensation, collective sensoria, and historical forces rather than black boxing exposure's qualities within the at-a-distance and oft invoked categories of the inconclusive or indeterminate. This thesis contributes back to narrative, poetic, and discursive studies of affect a thick account of the molecular conditioning of affect and a multi-scalar apprehension of affect and space—both attunements to contaminated indoor environments and the geographic distribution of these mobile spaces.

I conceive this thesis as a scholarly project of coalescing and apprehending the piecemeal processes of enervation and wounding that mark contemporary American economies and regimes of governance. The form that this project draws inspiration from the practices and vision of my informants as they aggregated spatially and temporally de-centered and diminutive instances of injury. What I have called the “chemical sublime” lays the groundwork for an alternative, fragmentary conceptualization of what counts as significant or moving. The chemical sublime, as perhaps all alternative social projects do, “aggregate[s] life diagonal to hegemonic ways of life” (Povinelli 2011: 30). In other words, the chemical sublime is an empirically observed phenomenon that re-imagines what can be deemed eventful enough to stir ethical consideration and potential intervention.



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