Building Home: Vernacular Architecture and Domestic Habit in the Ohio River Valley

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Sean P. Gleason

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This dissertation titled
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by
SEAN P. GLEASON

has been approved for
the School of Communication Studies
and the Scripps College of Communication by

Devika Chawla
Professor of Communication Studies

Scott Titsworth
Dean, Scripps College of Communication
Abstract

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Building Home: Vernacular Architecture and Domestic Habit in the Ohio River Valley

Director of Dissertation: Devika Chawla

Dwelling entails the consumption of resources. Every day others die so that we may live. I realize this simple premise after fieldwork. For six months, during the spring and summer of 2016, I visited 13 southern Ohio homesteads interviewing an intergenerational population, ranging in age from 23-65, about their decision live off-grid in the Ohio River Valley as a form of environmental activism. During fieldwork, I helped participants mix sand, straw, and clay to create cob—one of the earliest-recorded building materials. I attended workshops on permaculture and tiny homes. My participants told me why they chose to build with rammed earth, citing examples from the 11th and 12th centuries. I learned about off-grid living and how to recycle rainwater. I built windows with salvaged wine bottles and framed walls from scrap tires.

I now think of home as a material ecology of more-than-human forces that shape identity through habitual action. When we build, eat, or write about home we enter this material ecology. By going off-grid, my participants learn to recognize this material ecology through daily habits of consumption. Here, everyday materials—whether they be a barn, composting toilet, or dragline excavator—cultivate domestic sensibilities as we taste, touch, and feel home. As a sensory ethnography of home, this project examines how some individuals build home so that others may live.
Dedication

For Amanda, with love.
Acknowledgments

This project is about domestic habit. So, I would like to begin by acknowledging my parents. Thank you for reading to me at an early age and forgoing TV for books and bike rides. You have always made learning fun.

Writing is also habit. In service to the craft, I owe an incomparable debt to my advisor Dr. Devika Chawla. Thank you for teaching me the habits of a writer. I now think of “data points,” write every day, and carry a notebook because of you. I am lucky to call you a mentor.

A central motif of this project is the idea of home as a “more-than-human.” It is an idea that I have been fascinated with since my master’s program, and I owe a hearty thanks to Dr. Judith Grant for her mentorship and teaching. Many of the off-grid homesteaders I interviewed for this project described their home as a more-than-human space of environmental stewardship. Without your animal/human course I would not have recognized this sensibility. Many thanks.

I’d also like to thank Dr. Roger Aden for teaching me to consider architecture, place, and rhetoric as coterminous phenomena. You are the first rhetorician I ever met, and your Public Memory seminar convinced me to apply to the doctoral program at Ohio. My interests in space, place, and memory found a home in your seminar.

Graduate school can sometimes feel like a labyrinth. Thankfully, over the past four years though I’ve learned that Dr. Benjamin Bates is always in his office. Dr. Bates, thank you for answering the many questions I have posed at the threshold of Schoonover 418. But more importantly, thank you for teaching me that rhetoric, as an “art,” may take
a myriad of forms. Both your Research Methods and Rhetorical Criticism seminars taught me to think of communication as a “more-than” process of meaning making.
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Preface

We’d turn right on Rt. 4.

I passed these places.

And then finally.

Years later, I learned.

Mr. Spradlin’s Drive to School

Landscapes tell stories. Exploring Briar and Opossum creeks as a child taught me to find the stooped, bent branches of Birch and Sycamore over water. Once I recognized this, I began studying other trees by bark, leaf, and grain. I awoke to an ecology. Aside from the first time I helped deliver a black and white spotted Holstein steer in the slaughterhouse, this was my first realization that home is a place where some die so that others may live.

Years later when I began my life as a student, my dad usually took my sisters and I to school. Sometimes though we would carpool. When our neighbor Mr. Spradlin drove, we’d start on Rt. 4 just past the K9 Nite Club and an abandoned strip mall. There was a faded blue payphone next to an abandoned auto garage from a time when there was a bustling strip mall, motel, juke joint, and AM/PM Mart within walking distance.

About a mile later we’d turn right past the Dayton Correctional Institute and the Stony Hollow Landfill. As a young boy, I was in love with heavy machinery —the bigger the better. Cranes, tractors, and ‘dozers seemed to be closest to living. When you build things, you also move things, crush things, and otherwise interact with the radical
messiness of life. In May of 2017, Stony Hollow was cited by the Ohio EPA for “allowing emission of an air contaminant” include “Methane and Carbon Monoxide levels above 100 parts per million (ppm).”\(^1\) At the time what I remember best though were the coal rolling yellow caterpillars, which methodically arranged garbage bags, sofas, and forgotten television sets into a light brown mountain of trash.

Next, we’d pass the Dayton Water Reclamation Facility (DWRF) —a sprawling complex of concrete basins, piers, and mint green water pipes. Built in 1929, the DWRF annually processes up to 72,000,000 gallons of black water and industry pollutants for the 340,000 residents of the greater Dayton metropolitan area.\(^2\) At a young age though, buckled in the backseat of 8-person white Ford station wagon, I remember thinking that the facility looked extra-terrestrial, like a curious mix between an outdoor water part and top secret government laboratory. Once treated water from the DWRF is pumped under the adjacent B&O rail road line and behind the Fort Ancient settlement where it is deposited in the Great Miami River. During droughts, waste water from the DWRF contributes between 40 to 50 percent of total river flow.\(^3\) It is here, on mile 76.1 of the Great Miami river, that a city’s sewage is sifted, skimmed, and chlorinated before reentering an aquifer created some 2.5 million years ago by the seasonal creep of a mile-thick glacier.

Past the Fort Ancient settlement, the road narrows in a spit of land caught between railroad and river. Rivers and railroads are essential to the history of home in Ohio. The first commercial building materials—namely coal, timber, and brick—to exit the Ohio River Valley did so by river and rail. A century later, these tracks delivered
Huffy Bikes, Frigidaire appliances, and GMC trucks to homes across America. At the GMC plant near my house there were parking lots reserved for employees who drove Chevy’s, a honky-tonk across the street, and, for a while, an acrostic banner proclaiming that “God Made Chevy.” Home is a curious mixing of things, places, and people.

My final memory of this commute takes place at the end of a road. Near mile 76.1, West River Rd joins Nicholas Rd. At the stop sign, if you’re in the backseat craning your head toward home you’ll see six or seven shabby white cinderblock huts. The huts all have grey metal roofing, are single-story, and are surrounded by chain link and barb wire. This is “Unit 1” of the Dayton project where in 1943, under the codename “Postum” the Monsanto Corp. assisted the US Department of Energy in developing Polonium triggers that, two years later, would detonate the blasts over Hiroshima and Nagasaki.4 If ingested, Polonium is one billion times deadlier than hydrogen cyanide.5 At the Dayton project workers handled over 50 tons of radioactive materials with rubber gloves and plywood barriers designed to shields them against radiation exposure.6 After the War contamination levels were so severe that were disassembled piece-by-piece and interred at the Manhattan Project’s Oak Ridge lab in Tennessee.7 In turn, Monsanto moved downstream the build the nation’s first fortified nuclear weapons cache below an Adena earthwork built some 3,000 years earlier.

In 2007, when I moved two hours east for college, I found the sycamore’s distinct, chalk-white bark in haphazard, forgotten trails across campus. A year later I learned why: in 1969, the US Army Corps of Engineers rerouted the Hocking river
leaving these trees bereft of their native ecology. Like the bent branches of a sycamore, no home is permanent.

Home is a churning of past and present to shape the future. Home is a place of pipes, wires, and conduit. Home is a space of consumption. But most of all, home is wrought by time and patterns of action/reaction. In the Ohio River Valley, the story of home has been part and parcel of a complicated union of colonialism, extraction, industry, and consumption that I theorize as a more-than-human material ecology. This project tells this complicated story of home alongside the stories of people who decided to do something about it.
Introduction: Vernacular Architecture and a Tale of Two Barns

I believe that stories of home are some of the most important stories we tell. So, I begin this project in front of two barns from my family’s farm in southern Ohio. Both border a cornfield. The barn to my left is a whitewashed Dutch two story with tin copula and roof. Its partner—a long, squat tobacco barn with gray poplar siding—is partially hidden by the gnarled limbs of a Hawthorne tree. When I think of home, I think of these two barns.

Behind knee-high jimson weed and creeping honeysuckle, these barns tell a story of how home has changed in the Ohio River Valley. Climbing onto a nearby round hay bale, for instance, reveals blind-housed mortise and tenon joinery characteristic of pre-modern framing (see Figure 1). In lieu of today’s pneumatic nail guns, drills, impact drivers, and other power tools, early carpenters relied on heavy wooden mallets and long framing chisels to join timbers with wooden pegs. The result is a distinct pastoral geometry that is at once recognizable for its rustic sturdiness and puzzle-like intricacy.

Amidst the rafters, two more details are evident. None of the posts bear the markings of scribe rule framing—a custom-fit method of pairing trusses to adjoining mates before raising the structure with rope and pike poles.1 Given this unique fit, each post and beam was scribed with “marriage marks” to keep track of its place in the emergent structure.2 Moreover, due of weight of each beam, barns framed this way were a community affair, requiring a slew of volunteers to hoist, position, and peg each piece in place.
As a result, in the Ohio River Valley, “raising bees” originated to defray the cost of construction. Participation from the larger community was mandatory, and everyone played a part in the celebration. Women and girls prepared food while young boys carried tools for older, more experienced carpenters. As a lifelong native of Mineral country, West Virginia, Mr. George Stullenbarger remembers one such barn raising in August of 1895:

Finally the day came and so did the people — the Harveys and Wilsons from Short R, Md.; the Kitzmillers, Rafters, Pools, and Pughs from Kitzmiller, Md.;
and the Junkins, Dixons, and Shillingburgs from Elk Garden. There were about a hundred people here that day. Some came to work and some came to watch, but everyone came to eat. Mom and some of the women had baked about a hundred pies the day before, and there was corn bread, ham, beans, and fried potatoes. Although it may be easy to dismiss the observation of “about a hundred pies” as adolescent hyperbole, period-recipe books call for a dizzying array of barn raising foodstuffs. One such excerpt taken from Mary Emma Showalter’s *Mennonite Community Cookbook, Favorite Family Recipes* contains instructions for (among other things): 115 lemon pies, 500 fat cakes (doughnuts), 16 chickens, 50 pounds of roast beef, and 300 dinner rolls.

As the scale of this consumption suggests, building has always been part and parcel of underlying domestic habit. We build barns to have chickens, roast beef, and dinner rolls at home. Beyond cooking and construction though, barn-raising festivals also represented an elaborate celebration of community values. Not only were music and dance popular, but so was the enactment of old-world traditions such as *topping out* (an ancient practice of fastening a bough or wreath to the highest point of the frame after raising). As per tradition, the Master Carpenter would have certainly delivered a short speech and toast to mark the occasion. Had these barns been scribe rule framed, their construction would have been the social event of the year.

However, sometime along the way, an unknown 19th century joiner realized the benefit of assuming uniform timber size in construction. Although this *square rule* method could no longer use crooked or irregular timbers, it was now possible to erect
structures from interchangeable parts. Consequently, square rule-framing offers tantalizing evidence of what archeologists refer to as *terminus post quem*. Since square-rule building first appeared to a national audience via Edward Shaw’s 1831 publication *Civil Architecture*, we may assume that these barns are of at least mid-18th century origin, with a probable construction date of somewhere after 1860 (but before 1920).

Already by the time of construction, these barns were themselves a dying breed—the last relics of pre-commercial building practices. This had obvious implications for the builders themselves, as the profession, like so many others, took the first steps in an inevitable journey towards a modern ethos of efficiency. But this also had a larger socio-economic impact on an age-old nexus between labor and heritage, erasing the cultural tradition of free-laborers, artisans, merchants, and guilds. Prior to the dawn of prefabricated structures, building was itself an extension of one’s culture, evident in a plethora of regional styles. In the case of these two barns, I know from the joinery that whoever built these structures was trained in the Dutch rather than English, American, Scandinavian, or German traditions.

The story of these barns stands in as a synecdoche for broader changes in the construction of modern domestic space. For centuries, construction and design were largely cultural products, and architecture was very much an extension of the history, habits, and ecosystems of a given community. To this end, a modern emphasis on efficiency and uniformity has not completely erased regional style; even now, in the 21st century, there remains a marked difference between the stark northeastern symmetry of a Cape Cod (designed to shed snow) and the graceful adobe curves of a Pueblo Revival
(designed to shed heat). Still, the cultural underpinnings of today’s architecture pale in comparison to a historical union of builder, dweller, and habitat.

Historically, the home you built was a home constructed and furnished with materials readily at hand, and thus the design of homes changed from place to place. Architects refer to these historical regionalisms based on local climate and geography as \textit{architectural vernacular}.\footnote{Architectural vernacular} Unfortunately though, many contemporary builders fail to see vernacular style—\textit{for instance, the natural ventilation provided by a southern shotgun house or the monsoon protection offered by a stilted Indonesian Batak}—as anything other than a primitive response to environmental conditions by people who, in the words of renowned architect Frank Lloyd Wright, “knew no better than to fit them with native feeling.”\footnote{Frank Lloyd Wright} The more time spent studying vernacular traditions and habits though, the more Wright’s snide remark appears misplaced. Architecture is by nature idiosyncratic, but such idiosyncrasies are often motivated by pragmatic concerns that work with local ecologies to cultivate cultural values. In this way, vernacular dwelling embodies perhaps the purest distillation of building-as-extension of one’s identity, politics, and history. Importantly, this regional expression of heritage not exclusively restricted to architecture alone. For instance, the rustic mortar-chinked American log cabin is not only a reminder of the harsh conditions facing eighteenth century pioneers—its stalwart façade also serves as iconic testament to a new nation’s frontier ethic of rugged individualism, exceptionalism, and manifest destiny.
As individuals acclimate to location and environment, vernacular performances of home express cultural identity and heritage through the habits and architecture of domestic space. Traditional Japanese woodworking, for instance, is informed by the Shinto notion of Kami—a belief in the spiritual essence of trees, rocks, and other natural elements. For the woodworker then, the act of carpentry is one of resurrection, a way of interrupting natural decay in careful transformation. As master carpenter George Nakashima, writes in *The Soul of a Tree*,

> When trees mature, it is fair and moral that they are cut for man’s use, as they would soon decay and return to the earth. Trees have a yearning to live again, perhaps to provide the beauty, strength and utility to serve man, even to become an object of great artistic worth.⁹

The Japanese home, with its complex wooden joinery, harmonious aesthetic, and moveable paper walls serves as a physical embodiment of cultural values through dwelling. In this way, vernacular building creates sturdy, livable structures that exists in harmony with local spaces to extend cultural performances of dwelling to future generations.

~

I have always been fascinated by homebuilding. I was not a patient child, but I loved working with my hands. I also grew up on a farm absent of twentieth-century innovations such as drywall, city water, or air conditioning. Perhaps, for these reasons I developed an abiding appreciation for vernacular homemaking in the Ohio River Valley. I view vernacular homebuilding as an attunement to local ecosystems through
overlapping domestic habits. I thus read vernacular architecture in conjunction with outside landscapes, organisms, and histories that influence how we interpret, move through, and consume home.

For six months, during the spring and summer of 2016, I visited 13 southern Ohio homesteads interviewing an intergenerational population, ranging in age from 23-65, about their decision to revive vernacular building traditions in the Ohio River Valley. During this fieldwork, I helped participants mix sand, straw, and clay to create cob—one of the earliest-recorded building materials. I attended workshops on permaculture and tiny homes. My participants told me why they chose to build with rammed earth, citing examples from the 11th and 12th centuries. I learned about the habits of off-grid living and how to recycle rainwater. I framed windows with salvaged wine bottles and built walls out of scrap aluminum and tires.

I began this project to trace the histories and habits of vernacular architecture in the Ohio River Valley. I knew going into my fieldwork that I wanted to study how individuals design and build their own homes as a performance of cultural identity and environmental stewardship. I saw homesteading, home building, and sustainable architecture as a kind of counter-narrative to modern home-construction techniques—a view encapsulated best by Angie, one of my participants, who derides OSB (a formaldehyde-based resin plywood) as “one shitty board.” I saw pride in the way my participants talked about building, and I wanted to see how their homes, a space tailored to their individual whims, habits, and needs, allowed them to enact environmental, aesthetic, and cultural performances of dwelling.
Yet the most important lesson I learned during fieldwork is that no home exists in isolation. Through habits of homemaking, we privilege certain ways of being over others. For this reason, my project considers vernacular architecture and habit as affective attunements to the ecological health of the Ohio River Valley. Here, domestic materials, histories, and species combine through patterns of action/reaction in what I term a material ecology of home. In contrast to historical logics of consumption that dull the vibrancy of domestic matter, my participants build homes to attune to the ways in which daily habits impact others.

Today we no longer think of communication as a uniquely human endeavor. In the twenty-first century, scholars now posit communication as a process of relating across species as humans interact with the world around us through daily habit and performance. Most notably Celiste Condit envisions communication as a “weaving and reweaving of visible and indivisible four-dimensional webs, which constitute and reconstitute matter and ideation as humans, discourse, and other beings within a dynamic.”10 More recently in their 2016 special issue of Text and Performance Quarterly editors Travis Brisni and Jake Simmons articulate a similar “more-than” theory of communication,

The articulation of the world as a matrix of interaction, rather than a series of distinct spheres that comprise “nature” and “culture,” fractures the delicate fantasy that enables humanity’s comfortable isolation. Our ahistorical claims of sovereignty and mastery of the Earth are hereby revealed to be a mirage, a twisted refraction of the uncertainty and contingency that undergirds our relationship with the rest of Being.11
As an extension of this posthuman lineage, I situate home within a material ecology of human and nonhuman forces to consider how my participants enact environmental stewardship through domestic habit and architecture. Each subsequent chapter considers home in the Ohio River Valley as consequence of these everyday “more-than-human” transactions.

In his historical survey of domesticity, *At Home: A Short History of a Private Life*, Bill Bryson writes, “Houses aren’t refuges from history. They are where history ends up.” In an age when humans alter global patterns of circulation, growth, and decay through consumption, domestic space is literally framed by prevalent ideologies that structure what it means to “be at home.” In second chapter of this project, I present five ideological precursors that shape homemaking as a material ecology as humans interact with their physical surroundings. I begin with the history of the Greek home (*oikos*) to discuss how home, memory, and politics found a sense of home based in a logic of domination and control. Next, I consider the impact of this ideology relative to literature on dwelling, domesticity, and eco-architecture before returning home to discuss the history of natural resource extraction in the Ohio River Valley. The idea of home as constructed by this material history is a leitmotif that appears in various iterations throughout this study.

Homes can be of any size or shape and—in this way—demonstrate no universal qualities. Yet, the aura of homeliness is generally recognizable the moment we see, feel, taste, or touch it. As a place of dwelling then, home exists as both architectural expression and daily practice. We build home, but we also cultivate domestic sensibilities...
through daily habit and experience as we draw forth food, water, and resources. Vernacular techniques—including passive solar, rainwater entrapment, or cob building—cultivate different affective attachments to domestic matter. When you live with your food, compost your own manure, and harvest your own resources you take a special interest in how everyday domestic materials circulate patterns of action/reaction to alter an ecosystem.

Because of my belief that home is best studied in relation to its physical surroundings, I begin my third chapter titled, “Domestic Material Ecologies and Affective Response,” with a discussion of a rare ecological phenomenon known as “ghost lightning” to introduce the idea of home as structured by a domestic material ecology that spawns patterns of cause/effect across an ecosystem. It is a way of thinking about home, that like the habits of my participants, pays attention to how daily interaction between living and inert matter founds cycles of birth, growth, and decay. Key to my theory chapter is the idea that dwelling occurs as part and parcel of larger ecological patterns, which posit home as a more-than-human space. In this sense, material ecology—as both noun and verb—reasserts the vitality of domestic matter to create habits that irreconcilably change life for all species.

My next chapter “Research Practices: Fieldwork in a Material Ecology” centers around a fundamental question of ethnography, “what makes ‘good’ fieldwork?” Historically speaking fieldwork has long been considered a process of “going away” to study distant people, places, and lands. In turn, I envision fieldwork as an embodied process of habit forming that complicates notions of “home” and “away” through
everyday liminal affects of “in-betweeness.” For instance, when I talk with my participants about water politics in the Ohio River Valley, I am reminded of the six EPA “superfund” sites located over aquifers in my hometown, including three within five miles of my family’s farm. At the same time, however, my history is not their history, and I remain sensitive to the ways in which matter flows through bodies in different ways to produce different effects. To this end, I see my fieldwork as a practice of critical ethnography that expands the notion of fieldwork to consider home as a space of daily habit, rhythm, and embodiment that impacts some more than others.

At its core, critical ethnography challenges taken-for-granted assumptions about self/other, home/away, and subject/object. As a result, critical ethnographers attend to the situational and contingent realities of working alongside others. As Renato Rosaldo argues, “The once dominant ideal of a detached observer using neutral language to explain ‘raw’ data has been displaced by an alternative project that attempts to understand human conduct as it unfolds through time and in relation to its meanings for actors.” As a result, I rely on sensory ethnographic methods rooted in affect theory to understand how, in the words of anthropologist Nicholas Shapiro, “diffuse sensory practices generate knowledge of, attention to, and engagements with everyday materials.” Like my participants, I’m interested in studying home as a space of everyday action and habit founded in the circulation of biological, historical, and affective forces.

My hope, throughout this project, is to highlight the locations, places, and people I worked with. Thus, I envision this chapter as an aesthetic representation of my methodological sensibilities and orientation. You’ll learn specifics—not just general
abstractions—about the people I met, who I spoke to, what I did in each place, and how these conversations shaped my thinking about home. Drawing from a phenomenological understanding of writing as both a text and object, I view this chapter as an attempt to tip the scales of academic writing towards the rich evocative description of fieldwork. In this way, my attunement to the field consists of an “art of being sensitive” to fleeting feelings and perception. As a methodological device then, creative writing, and more specifically the anecdote, afford an understanding of experiences that might otherwise elude us.

In recent years, the phrase “ecology” has evolved to articulate a political movement, whose members protect the environment from undue human influence. My first analysis chapter, “Liminal Places, Timber Ecologies, and Eco-Homebuilding,” presents a story about the timber industry’s history in Appalachia centered primarily on the stories of John, a local carpenter and solar panel installer in southeast Ohio. John’s father and grandfather before him were excavators with a deep connection to the forests of the Ohio River Valley. Consequently, John views his strawbale home as an extension of his politics given, that, as he notes, “the decisions we each make daily add up to a lot more than us ranting and raving about politics. I just think it all adds up to the little things we have to do.” John figures that his job, and the home he built in 1998, are key to fighting exploitation in the Ohio River Valley. Like John, many of the participants I interviewed discussed their homes in relationship to the physical topography and personal histories of Appalachian Ohio.
To begin this chapter, I rely on what, Michael Humphreys and Tony Watson define as semi-fictionalized ethnography, wherein, the author “restructures events occurring within one or more ethnographic investigations into a single narrative.” Although I believe that all ethnography engages in some degree of fictionalization, this vignette stands apart from the other stories contained within this study in that it is a second-hand telling of a participant’s story, and I have thus “filled in some of the gaps” so-to-speak regarding the thoughts of John’s grandfather Melvin. Throughout this chapter I have employed an authorial style that favors thick, storied description to make sense of my participants’ experiences which often draws from visual documents, archives and interview material.

The idea of home as a space of habitual, rhythmic consumption founds a guiding motif in each of my three analysis chapters. My sixth chapter, “Tile Saws, Earthships, and Rhythms of Dwelling in a Deep Ecology” focuses on three female homebuilders whose decision to go off-grid was inspired by eco-architect Mike Reynolds. In their own way, each woman has committed to building home with materials that have been forgotten or otherwise left to decay—notably glass bottles, car tires, and scavenged lumber. In short, these builders cultivate a sense of home steeped in trash.

On these homesteads, refuse is granted a second life. When you build a house with discarded materials, you begin to think about what waste is and how it impacts other organisms. It is a performance of dwelling that I theorize as a Deep Ecology, which treats all matter with intrinsic value. Like the other stories within this project, these participants build home as an environmental commitment to work with nature rather than against it.
As both philosophy and habit then, Deep Ecological performances of home counter a *tragedy of the commons* founded in the commodification of matter. For homebuilders like Laura, Sasha, and Angie, building your own home becomes a way of life; a way to “fuck the man” (as Sasha is fond of saying) and tear down the master’s house, not with his tools, but with his trash.

*Emergent properties* describe ecological changes that are more than the sum of their component parts. In my final analysis chapter I consider how everyday domestic materials—whether they be water, dirt, or pollution—demonstrate emergent affective properties that shape how we think, feel, and experience home.

As I note within this chapter, the evolution of modern domestic building materials (e.g., lead and arsenic paint, asbestos siding, and Urea Formaldehyde-bonded fiberboard and insulation) represents an implicit yearning to establish a trans-temporal permanence of home through domestic chemistry. As with any decision within a material ecology though, there are unanticipated consequences when humans indelibly alter matter. In the case of home, these domestic materials produce quotidian attunement to what anthropologist Nicholas Shapiro terms a “chemical sublime,” as toxic matter enters an ecosystem through decay. In the Ohio River Valley, coal slurries, C8 particles, and nuclear waste are especially pressing examples of such toxic matter that we often overlook as intrinsic to modern habits of dwelling.

My participants build homes to honor local ecologies through domestic habit, so I begin this chapter with the story of two participants, Rachel and Alex, who built a rammed earth home with cisterns to remove themselves from a local water grid that was
contaminated by DuPont’s Washington Works plant in the late 1980s. The next two stories in this chapter expand on themes of water, dirt, and dwelling to consider two former sailors Danny and Stanley who have dedicated their lives to anti-proliferation activism and sustainable dwelling. As these participants note, water that once nourished life now finds itself in quarries, aquifers, rivers, and coal slurries that are polluted, toxic, and deadly. I end this chapter with one personal discovery of “dirty water” in a material ecology.

There is no terminus in a material ecology, only points of entrance and departure. In “Big Muskie’s Bucket,” I conclude this project with a pilgrimage to AEP’s “Miner’s Memorial,” to see what’s left of the world’s largest dragline excavator used to strip mine over 100,000 acres of southeast Ohio. For much of 20th century, the coal mining industry, known informally as “King Coal,” ruled daily life here. Today, however, mining companies have left southeast Ohio to pursue more profitable ventures. To understand why many of the people I met during my fieldwork lived off-grid, I had to understand the history of King Coal as well as the contemporary environmental battles over the lands and legacy of the Ohio River Valley.

My participants build homes, in large part, in reaction to the history of natural resource extraction and ecological contamination in the Ohio River Valley. These homebuilders believe all life is sacred and their homes strive to rehabilitate local ecosystems that have been irreparable damaged by the coal, lumber, natural gas, and brick industries. In this way, vernacular homebuilding engrains daily habits, which remind my participants that the consumption of domestic matter has ecological
repercussions. As a point of departure then, my conclusion enacts a larger call to attune to domestic material ecologies as acts of environmental stewardship and cross-species care.
A Short History of Home and Dwelling

Although my mother’s parents came to the United States after WWII, my father’s family has long called southern Ohio home. The first Gleason (of my ilk) to set foot on American soil did so as a Union mercenary during the Civil War. After the fighting, more Burkes and Gleasons came to build railroads and farm the Ohio River Valley. In Wilmington Ohio, my father’s family propagated heirloom strains of seed corn known simply as “Gleason’s Corn.” When I was a child, we would sometimes visit the Irish Catholic cemetery in town, where my father told stories about his grandmother stuffing the outlets of her home with dirty rags to keep “that dangerous electricity” from seeping into the bedrooms at night. When seed farming fell to mechanized, mono-cultivation courtesy of multi-national corporations like Monsanto, my family joined the great rural exodus, moving to the manufacturing hub of Dayton, OH. The Ohio River Valley is a
place I have called home my entire life and a place where my paternal family has lived since the late 19th century.

Histories are easily forgotten. They are forgotten when replaced with new habits, but they also slip away as memory decays. After my grandmother was diagnosed with Alzheimer’s, no scrap of paper was safe. She took to fears that she owed someone money, and her life became a daily sleuthing of lost habits—Where is my phone? Who has my phone? What do they want? Where’s Jim?

Because of something as quotidian as plaque build-up between aging brain cells, stories of home become harder to tell. We can longer track down those yellowed letters from the Civil War, and going to the store is an impossibly bewildering journey. In turn, I remain sensitive to how material forces—whether they be a war, a corporation, or Alzheimer’s, shape domestic memory. Throughout this study, I illustrate how the Ohio River Valley has been shaped by a larger material ecology of extraction in the service of dwelling, and why my participants build environmentally friendly off-grid homes as a result. Before I can do so, however, I must discuss how home, dwelling, and domesticity have evolved over time.

To tell the historical story of home, I have selected five stories, the first of which, begins in Greek antiquity, to map a material ecology of ideological, physical, and affective forces shaping the history of “home in the West” as a place of domination, modernized production, and domesticity. Together this history shapes how I interpret stories my participants share about vernacular homebuilding in the Ohio River Valley. When John, for instance, struggles to reconcile his trade as a carpenter with what he
terms, “divide and conquer ambition,” I am reminded of a long history of Western domination codified in the architecture and habits of home. As John notes,

I see that in me as a white male, coming from this family I did come from [i.e., one that is employed in manual labor] that I do look down on people without this certain level of “ambition” [air quotes] and then I think to myself, “man what has ambition got us.” Like we had a certain ambition that maybe the native peoples who lived here before us who were happy with the ways things were didn’t have. I’m not sure but I wonder—did we have this extra level of ambition to clear and conquer that wasn’t there. You know, ambition to come in and clear your spot, change your surroundings, conquer your whatever and I struggle with where is that balance of where I’m at. [John pauses] I’m not “ambitious,” [in that way] it’s just ambitiousness [pause] for greed [pause] for more.

Likewise, when Stanley, a former sailor and cob builder, discusses his aversion to a “post-WWII logic of militarized consumption,” I interpret his belief in contrast to modernism’s commitment to “solve” the “problem” of vernacular architecture through mass-production. And finally, when female homebuilders (notably, Sasha, Angie, and Laura) describe their environmental activism as rooted in an ethics of care towards all living organisms, I can’t help but consider these habits in conjunction with a philosophical lineage that paradoxically equates femininity with domesticity, yet historically excludes both from the body politic. In this way, my fieldwork implicitly draws from the following literature to make sense of home in the Ohio River Valley.
It would have been nearly dusk when the “Great Hall” (trans. *Andron*) of the nobleman Scopas came crashing down. If Scopas’ home was typical of Greek nobility, his room featured colorful mosaic floors, small ornate tables and gilded reclining couches (trans. *kline*) for dining, as well as extravagant lime-plaster frescoed walls: the very best Athens had to offer in the pursuit of wine, entertainment, and comfort. Still, as Quintillian recounts some 500 years later, on this fateful day “[the] banqueting hall fell in upon the heads of the guests and wrought such havoc among them that the relatives of the dead. . . were unable to distinguish not merely the faces but even the limbs of the dead.”\(^2\) From the dust, blood, and rubble not a soul survived, save for a young poet, Simonides, who,
by chance, escaped unscathed. Upon his return, Simonides recalled the identity of each deceased by where they sat during the symposium. As Cicero writes in his treatise *De Oratore*:

The story goes that Simonides was enabled by his recollection of the place in which each of them had been reclining at [the] table to identify them for separate interment; and that this circumstance suggested to him the discovery of the truth that the best aid to clearness of memory consists in orderly arrangement.³

For centuries, Simonides’ feat was synonymous with the *method of loci* used by early rhetors and poets to memorize verbal art forms in preliterate oral cultures. From the construction of a mnemonic *memory palace*, rhapsodes could now recite lengthy speeches and epic poetry via a nostalgic conflation of memory, habits, and home.

The lore of Simonides reveals an implicit commitment within western philosophy to differentiate between *home* and *house* in terms of memory.⁴ Whereas the *house* exists as an architectural object with a fixed spatial and temporal location, the notion of *home* extends beyond the physical realm to the ineffable domains of memory and symbolic meaning. Although Anglo-European conceptions of home have long privileged a physical structure or dwelling, home is not necessarily confined to this place.⁵ In this way, the notion of home brings together memory, habit, and physical matter in a complex assembly of meaning where shelter is one aspect among many.⁶ As political scientist Shelley Mallett writes, “home is a *place*, but it is also a *space* inhabited by family, people, things, and belongings—a familiar, if not comfortable space where particular activities and relationships are lived.”⁷ Thus the relationship between home and house is
a culturally and historically bound one, implicating memory as well as the family, gender, politics, and daily action. In a word, domesticity.

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Imagining the ancient home (oikos) is nearly impossible unless we recognize how regimented the practice of everyday life was in Greece. From marketplace transactions in the agora, to the ritualistic folding of athletic or religious festivals known as (alethurgy), daily life was marked by a consistent and conscientious attempt to confer social standing. Perhaps not surprisingly then, the Ancient Greeks were among some of the first western civilizations to equate architectural style with values of proportion and balance vis-a-vis the Doric, Iconic, and Corinthian architectural orders. As witness to this tradition, architecture and public memory were organized to facilitate philosophical and social hierarchies underpinning Athenian cultural ideals of truth, justice, and wrongdoing. To this end, the home was no exception.

The typical Greek home featured a pillared courtyard known as a peristyle from which adjacent rooms were located. In practice, peristyles served as an extension of the agora and thus featured the same gendered segregation of space that regulated admission into the public sphere (polis). Upon entering the oikos visitors would discover two chambers—an inner sanctum (gynaeceum) for cloistering females and male andron (a kind of ancient precursor to the 18th century bourgeoisie salon). In each space, admittance was gendered, and as the late phenomenologist Hannah Arendt observes, control over life in the household served as a vital precondition for the political freedoms enjoyed by Greek democrats within the polis. Although speech was valued as the medium of political
activity—a fact evidenced in Aristotle’s reduction of the human to *zoon logon eikon* (a being capable of speech)—“without owning a house a man could not participate in the affairs of the world because he had no location in it which was properly his own.”10 With the development of Athenian democracy then, domestic customs and architecture took added weight prepolitical means to secure free speech. Within this early articulation of public and private realms, tyrannical control over the household served as a necessary condition for political autonomy. As Arendt writes, “as far as the members of the *polis* were concerned, household life exists for the sake of the ‘good life’ in the *polis.*”11 Within this space, politics was founded as practice of cross-species segregation and domination.

Although Arendt does very little to problematize the division between *polis* and *okios*, her writing historicizes the domestic sphere as a pre-political space of control. This western tendency to paradoxically overlook home as site of politics (while nevertheless predicking dominion over a homestead as an precursor to political freedom) is also noted by Italian theorist Giorgio Agamben who traces the birth of political subjugation to male control of reproductive life as both *oikonomos* (trans. “the head of an estate”) and *despotes* (trans. “the head of the family”).12 Implicit in Agamben’s writing is the notion that the philosophical distinction between home and polis is one founded on dichotomies of domestic control (i.e., male/female, free/slave, human/nonhuman). Here the entire household, not just the biological family, were subject to rule by fiat. All life was judged according to the ability to leave the *oikos* and enter politics. For those, unable to leave home, however, their lot was cast with the despotic rule of the *oikonomos*.
Domesticity and Dwelling

There is much disagreement as to when, and where, domesticity underwent a reduction from the *oikos* to the biological family. In his book, *Home: A Short History of an Idea*, architectural historian Witold Rybczynski, for instance, insists that it was not until the introduction of the 17th century bourgeoisie townhouse that the family came to replace the household staff as the fundamental kinship unit of the home.\(^{13}\) In contrast, Bill Bryson’s study of the western home links the invention of the modern chimney in the 14th century to the development of domestic familial chambers. According to Bryson, the chimney had a substantial impact on the social structure of households as it afforded as an upper floor, known as a “Great Chamber,” where the head of the household and his family could retire. As a result, stark divisions became customary between the family and others (most notably servants and farm animals) who also frequented the household. Bryson points out that with the invention of personal space “servants stopped being part of the family and became, well servants.”\(^{14}\)

Regardless of when “family” overtook “household” as the primary relational unit of domesticity, home remained a pre-political space. Moreover, when home was politicized it often encouraged *oikos*-based logics of domination to relegate women to a life of reproduction and domestic labor.\(^{15}\) In particular, the rise of the *cult of domesticity* throughout the eighteenth century elevated the status of women within the home relative to the four cardinal virtues of *piety, purity, submissiveness*, and *domesticity*.\(^{16}\) With the exception of church functions and social societies, this ideology of *True Womanhood* strengthened female exclusion within the public realm. Although pioneering
individuals—including Angela Grimke, Mary Harris “Mother” Jones, and Carrie Nation—relied on feminine tropes of the women-as-protective-mother to engage in politics, most women lacked the resources to subvert the patriarchal tethering of the household.17

Despite the fact that home is often discussed as a feminine or nurturing space, women (and their habits) have historically been erased from domestic histories.18 Practical examples of this disenfranchisement include a vast body of literature regarding how architectural design, housing practices, and cross-cultural domestic technologies buttress patriarchal ideologies through proto-industrial logics.19 For example, Ellen Luptan and J. Abbott Miller consider how the design of both kitchen and bathroom emerged over the course of the early 20th century to habituate the body to gender through consumption, while Rybczynski equates the rise of home economics as a natural extension of the industrial legacy of Fordism and Taylorism that sought efficiency through the study of movement.20 As these authors contend, at every turn, control over the body was part and parcel of domestic habit.

As a result of this history, architect Ruth Madigan concludes that home is often a space of social isolation wherein women feel fearful, physically vulnerable, and insecure.21 Home can thus be reinterpreted along a continuum of domination, control, and transgenerational violence.22 In many ways, feminist scholarship on home addresses these liminal histories to dispatch of sensibilities that equate home with as a safe, stable, or cultivated place. The goal here is to envision home and away not as oppositional ideals but as “patterns of estrangement in which the living and yet mediated relation between
being, home, and world is partially reconfigured from the perspective of those who have left home.” In this sense, home can be experienced as diaspora, migration, and journey.

This liminal nature of home marks a lineage largely ignored within the continental tradition, which has generally focused on nostalgic, stable memories captured in the notion of dwelling or being-at-home. Here domestic habit(at) takes on metaphysical significance as an idealized haven where people may retreat and relax. In his classic work, The Poetics of Space, Gaston Bachelard, for instance, describes the domestic space as a “cradle of being” where “the house protects the dreamer, the house allows one to dream.” Likewise, geographer Yi-Fu Tuan advances a similar idea when he states that “unique to human beings among primates is the sense of the home as a place where the sick and injured can recover under solicitous care.”

The western emphasis on an ideal or “dream home” is most noticeable in the late writings of German philosopher Martin Heidegger. Throughout Heidegger’s writings, home is theorized as a secure and safe place—a refuge from the outside world. Dwelling is thus an act of staying with things, of preserving the nature of mortality in things though daily habits of creativity, regeneration, and imagination that Heidegger terms “safeguarding” (trans. Wunian). In his essay “Building, Dwelling, Thinking,” for instance Heidegger notes that “the basic character of dwelling is also safeguarding.” It is this safeguarding impulse, that provides, per Heidegger, shelter for being-in-the-world (trans. Dasein). As a result, many contemporary phenomenologists interpret home as a space of creativity, regeneration, and imagination.
In the western philosophical cannon, Heidegger was one of the first writers (along with Spinoza, Kant, and Leibniz) to articulate an account of being based on human/nonhuman interaction outside subject/object relations. To borrow, Heidegger’s now famous example, we may analyze a hammer as an inert collection of steel and wood, or we may consider its value or essence according to how it is used to change the world around us. As a corollary to this phenomenological premise, 20th century writing on domesticity underwent a similar epistemic shift as scholars began to paying attention to how we produce domestic space through habit. Robert Ginsberg, a philosopher of dwelling, notes:

We make our homes. Not necessarily by constructing them, although some people do that. We build the intimate shell of our lives by the organization and furnishing of the space in which we live. How we function as persons is linked to how we make ourselves at home. We need time to make our dwelling into a home. Our residence is where we live, but our home is how we live.33

At their core, phenomenologists emphasize home as a lived space, which manifests a distinct form of relation between subject, space, and memory. By recognizing the sensory and affective aspects of dwelling, the focus shifts from metaphysical questions involving what the nature of home “is,” to a phenomenological study of how home is enacted through the practice of everyday life.34 For instance, anthropologist Michael Jackson explains, “home is [thus] grounded less in a place and more in the activity that occurs in the place.”35 In this capacity, home—as both historical phenomena and lived
experience—attunes indwellers to the interaction of body and environment through daily habits of consumption.

Habits, Home, and Modernity

It is curious that—historically speaking—the phenomenological reduction of home to nostalgic habit developed in stark contrast to the prevailing sentiments of twentieth-century architecture, which prized efficiency, function, and symmetry. While Heidegger may have favored his bucolic Black Forest retreat, by the mid-twentieth century the legacy of Victorian innovation, industrialization, and mass production resulted in an aesthetic that equated architecture to mechanical engineering. This impact of high-modernism was most noticeably felt in the development of International Style of architecture, which sought bold, industrial, and efficient housing under the Le Corbusian auspices of the home as “a machine for living.” Here, the impulse was to bend habit to a unified current of consumption through the industrial production of dwellings irrespective of local climate, culture, or history. In this new epoch, the body was a “surrogate machine in an industrial age” and habits were studied as a scientific extension of architecture.36

Perhaps no dwelling distilled this modernist ethics of home as well as Pruitt-Igoe housing project in St. Louis, a massive complex of 33 high-rise towers sprawling over 52 acres. Designed by Minoru Yamasaki (the same architect who would go on to erect the World Trade Center), Pruitt-Igoe was heralded as modernism’s vision of “radiant city” urban planning. Apartments were built with ample window space to catch daylight, separate pedestrian-only paths were designed as “streets in the sky,” and stairwells opened to communal galleries to facilitate a sense of community among residents.37
Through a dictate that form should follow function, modernist architects sought quality, affordable housing through mass production.

Twenty years later, in 1972, the St. Louis Housing Authority began demolition of the now-vacant tenement. By all accounts, Pruitt-Igoe was a demonstrative failure of modernist architecture—a blight against the backdrop of modern notions of home as a “stable center of safety and domestic virtue.” Most notably, in the attempt to reduce housing to a kind of “factory of dwelling,” Pruitt-Igoe architects failed to consider how home is, in fact, rooted in daily activity and embodied experience. For instance, the elevators in each apartment complex stopped only on the fourth, seventh, and tenth floors, requiring passengers to revert to stairwells marred by vandalism and crime. In contrast to the vernacular tradition of considering home as an extension of local cultural identity, history, and topography, Pruitt-Igoe paid little or no attention to how bodies traverse space in different ways. As a reaction to this essentializing tendency, architects in the second half of the 20th century began designing homes that took local ecologies and daily habit into consideration. As we interact with everyday domestic objects, matter, and beings, we give rise to local articulations of dwelling that demand a vernacular approach to our surroundings.
Figure 4: Hand-sawn dovetails on a pine carcass. Athens, OH. Author image.

The luxury to curate domesticity through global commodity is a decidedly modern phenomenon. By no means is this a necessarily bad thing; many stalwart critics of contemporary consumption (myself included) fail to turn our criticism inward to the fine Turkish *kilims*, French enamel pots, and Egyptian cotton populating domestic space. Moreover, for the first time in history, home furnishings are widely available via mass-production. It was not so long ago that having a bed of one’s own was considered a luxury: for centuries individuals slept on slabs covered with peat moss, straw, or other natural bedding, many times communally. Most people could not afford furniture, let alone furniture from another country or continent. Furniture thus remained a valuable commodity evidenced by the (increasingly rare) tradition of passing down heirloom chests, chairs, and beds to future generations.
Today we no longer dwell in the time-consuming crafts of stone masonry, hand-sawn dovetails (see Figure 4), or horsehair plaster and, vernacular architecture has given way to a new domestic mentality of “bigger is better.” According to a 2012 US home pricing index report, the average home cost has more than doubled since 1970 and increased exponentially since 1900. Although many factors, (including inflation, consumer confidence, and other macro-economic trends) impact housing prices, the cost of construction has steadily risen as homes have become larger. For example, census data collected since the mid 1970’s report a 50 percent increase in floor space circa 2014. At same time, ceiling height, another indicator of mean home size, has increased approximately ten percent since 2007.

In many ways, this trend towards larger homes represents a distinctly un-American tradition. Compared to the imposing English Parsonage, or the gilded Beaux-Artes style of the Palais Garnier opera house, early American builders historically favored modesty, a practice evident in the Spartan embellishments of Georgian colonial architecture. Even the nineteenth century’s Victorian revival—notably America’s most decadent style—failed to expand the floor plan beyond two stories. In large part, this demure ethos regarding home size was characteristic of an emerging American sensibility that equated smaller domes with domestic comfort. For instance, writing near the close of the eighteenth century, author Catherine Beecher (sister to Harriet Beecher Stowe) notes how “small and economical houses can be made to secure most of the comforts and many of the refinements of large and expensive ones.” Compared to the continental tradition of palatial upper-middle class dwellings (often complete with scullery, servant’s
quarters, and separate changing rooms) American modesty inscribed domestic comfort vis-à-vis an inherent *mise-en-place* of efficiency and thoughtful proportion.

To this end, a growing cultural critique of larger homes has emerged to counter the contemporary belief that the biggest house is necessarily the best home. For many, the home has ceased to become an authentic space of dwelling thereby echoing Theodor Adorno’s denouncement of the modern home-as-commodity within *Minima Moralia*, The newly functionalized ones, constructed as a tabula rasa, are cases made by technical experts for philistines, or factory sites which have strayed into the sphere of consumption, without any relation to the dweller: they slap the longing for an independent existence, which no longer exists, in the face.44

Today alternative architectural visions of home have emerged that reimagine the house as an organic union between dwelling and indweller rather than as a “hollow casing” for commodity.45 Within this milieu, smaller environmentally friendly homes are prized as a new architectural vernacular that stresses the importance of dwelling as pragmatic, political action.

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The contemporary eco-home movement traces its genesis back to the Cultural Creative efforts of the early 1960s whose members sought to enact alternative ways of living responsible, meaningful, and sustainable lives. As an extension of this lineage, “eco-architects” wish to counter the idea that a home should impress rather than nurture.46 In the words of eco-architect Sarah Susanka, the modern American dwelling can be summarized by a paradox of having “so many rooms, but so little time.”47 Thus,
what the environmentally friendly home may sacrifice in size, it makes up in functional living space that amplifies rather than inhibits dwelling. Under this new rubric, a home’s value is judged by the sustainable habits it inspires rather than the size of its kitchen.

Similar to Henry David Thoreau’s famous dwelling on Walden Lake, proponents of eco-dwelling construct their identity in contrast to what they are not: dwellers of the large mass-produced “suburban box[es].” For instance, in her manifesto on small living, *The Not So Big House*, Susanka recounts driving through a newly constructed housing complex to meet with a new client:

The next week I drove out to the suburbs to see the house, past row after row of enormous structures covering the newly developed hillsides. These houses loomed in their treeless sites, staring blankly out towards vistas of more in the same. I felt as though I was driving through a collection of massive storage containers for people.

Susanka’s memory suggests several noteworthy features about how eco-architects frame a sense of “authentic dwelling” in opposition to larger modern homes. In Susanka’s recollection, the “enormous structure” of the suburban house dwarfs the natural topography. Accordingly, suburban sprawl represents a metaphoric inverse of vernacular architecture. Whereas the former attempts a union of nature and humanity through dwelling, the latter spills over flora and fauna like a protean contagion.

Susanka also notes that the houses themselves “loomed” over treeless sites, suggesting that these fabricated structures threaten nature in an almost human manner. In this way, Susanka implicitly leverages a premise that shelter is itself an extension of the
individual; proper shelters recognize “nature” and “culture” in symbiosis to create a space where humanity can flourish and prosper. Importantly, this vision is an aesthetic and moral one predicated in the balance between individual introspection and environmental action.

In contrast to self-built, vernacular dwellings, modern homes lack an attunement to local ecologies, and as Susanka notes, it is with a vacant “blank stare,” that the suburban house interacts with the world around it. The suburban McMansion is thus transformed in Susanka’s eyes to an anthropomorphic monster of commodity. Such dwellings lack the intimate and personal design features necessary to sustain an authentic link between indweller and dwelling.

Finally, by calling these homes “mass storage containers,” Susanka highlights their impersonal nature as storehouses for material possessions that trap the indweller in an artificial world of epic proportions. Rather than sustain life, large homes are reinterpreted as pathology, cleaving humanity from the essence of life. Much like the coffin, the blank stare of the large “suburban box” signals the impending decay of an ecosystem.

To avoid such disconnects between ecology and dwelling, eco-builders place a premium on the vernacular relationship between housing design and environmental surroundings. Outside of the Ohio River Valley, this sentiment is perhaps best articulated by builder Mike Basich’s description of how he came to the particular design and shape of his Colorado small home: “I started thinking what kind of shape will the house have? I realized that where I felt most alive was on a mountain peak.” Thus, Basich’s home
exists as a natural outgrowth of his surroundings as well as his identity as a professional snowboarder. This connection is realized wholly in Basich’s design, which is literally subsumed into the mountain during the winter when the home is enveloped by snow to provide a natural form of insulation. This embodied connection is also extended in the larger call on the part of other vernacular builders to construct dwellings from recycled, salvaged, and eco-friendly materials (see Figure 5). Strategies such as the use of dead and downed trees for lumber, cob construction, solar power, and earthen floors all reinforce a natural link between eco-homes and nature. Here, vernacular architecture implies an organic union of dweller and environment as an extension of holistic building practices.

Figure 5: Lisa and Jacob’s strawbale home. Author image.

For many eco-architects, a return to vernacular architecture represents a form of environmental activism undertaken to reclaim home as a site for politics. For instance, Darran Macca and Ann Holley, have constructed one such home through the *ProtoHaus*
initiative, which they describe as a dialogic project in experimental architecture emphasizing themes of sustainability, functionality, aesthetics and education. Reflecting on the constraints of eco-architecture, the couple concludes, “such small living demands that inhabitants will be more involved with both the environment and each other. This lifestyle has allowed us to get rid of many material possessions and concentrate more on how we live.”51 ProtoHaus, like many of the vernacular or off-grid homes I visited over the course of my fieldwork, engrains specific eco-friendly habits, such as rainwater entrapment and photo voltaic (PV) solar power, to amplify daily performances of conservation, anti-consumerism, and regional culture. In turn, in the final section of this literature review, I consider the history of vernacular dwelling in the Ohio River Valley to introduce regional histories of extraction, exploitation, and conservation that my participants evoked during my fieldwork.

At Home in the Ohio River Valley

Humans, more than any other species, retain the capacity to alter our environment in the service of dwelling. Some would say it’s essential to the very nature of the human condition. Hannah Arendt, for one, writes about the idea of labor, work, and action as politically generative forces that allow humans to dwell on earth and craft products that transcend mere survival.52 A hallmark of the human condition, per Arendt, is that humans are capable of producing objects that exist across time to give rise to the world around us. Moreover, as we interact with these objects in the domestic sphere, dwelling becomes a cyclical process of ecological disruption as we construct a sense of home through daily consumption.
When the first Americans built homes into the Ohio River Valley, they did so without rail, canal, or steam engine. To appreciate this domestic history though, we must first understand the state of architecture in colonial America colonies. In contrast to the established colleges of architecture in Europe, American builders lacked formal training in drafting and design. As a result, craftsmen were often—as historian Hugh Howard characterizes them—“a motely mix of jumped-up masons and joiners who owned a builder’s book or two each.” Early Americans also dealt with a scarcity of familiar materials; although timber was plenty, gone were the vast limestone quarries, marble mines, and skilled stone masons of the old world. For these builders then, adapting to local ecologies was an architectural necessity.

More than any other architectural style, I believe vernacular dwellings showcase human ingenuity. But as a creative enterprise rooted in local ecologies, vernacular architecture, by nature, lacks a standardized style. In contrast, western philosophy has long preoccupied itself with “style.” For instance, Thomas Jefferson, considered by many to be to be America’s first architect, wrote extensively on the relationship between a nascent American ideology and her dwellings. But if you examine the letters and correspondence of the young statesman, you’ll see that America’s architectural lineage was largely forged from its continental brethren: from the Parisian market Halle au blé Jefferson took notice of wooden “honeycombed” domes, noting how such a structure would be well suited to the Virginia climate and materials; at Nimes, while recovering from a dislocated wrist, Jefferson marveled at “one of the most beautiful, if not the most beautiful & precious morcel [sic] of architecture left us by antiquity,” and in a note of
advice to fellow European travelers, Jefferson wrote of the need for America to adopt the “most important art of architecture.”\(^56\)

An autodidact and polymath, Jefferson embodied the Enlightenment ideal of a scholar-gentleman who held a keen interest in a variety of topics including, botany, horticulture, astronomy, and archeology. But, as evidenced by his personal writings, it was architecture that most held Jefferson’s interest. To be sure though, Jefferson deplored vernacular dwellings, which he saw as crude approximations of European sensibilities. As he writes in his 1782 treatise, *Notes on the State of Virginia*, “The private [American] buildings are very rarely constructed of stone or brick; much the greatest proportion being of scantling and boards, plaistered \([sic]\) with lime. It is impossible to devise things more ugly, uncomfortable, and happily more perishable.”\(^57\)

Jefferson’s antipathy towards vernacular dwelling should not be dismissed merely as the stylistic musings of a dilettante. Rather, I see Jefferson’s rebuke as part and parcel of a western, humanist impulse to establish permanence through domestic architecture. For Jefferson, dwelling itself was marked by epistemic and moral character as he adhered fervently to the belief, borrowed from Italian architect Andrea Palladio, that architectural style evoked virtuous action.\(^58\) As a result, domestic architecture became, for Jefferson, a moral pursuit aimed at fashioning a well-regulated body politic. In search of a new American style, Jefferson found relief in the permanence and stability of brick.

As evidenced by architectural visions at Montpelier, Monticello, the University of Virginia, Tuckahoe, and his plans for the President’s house in Philadelphia, Jefferson sought to cultivate a national identity as the nation’s first architect. Most importantly, on
an “unruly” continent, Jefferson sought stability and a method to bring American
dwelling into the European fold of “civilization.” Although today he is often remembered
as an advocate for a bucolic vision of agrarian democracy, in practice, Jefferson sought to
expand American dwelling through an industrialization of the brick, slate, and timber
industries. With Jefferson at the helm, American architecture began an earnest path of
proliferation, consumption, and growth that often drew from the abundance of natural
resources located within the Ohio River Valley.

Because early industrial building materials such as bricks, sandstone, and slate
were readily available along the Ohio river, by the late 1770s land speculation companies
began moving westward to tame these commons. Over the course of the early to mid-18th
century, early American corporations, such as Ohio Company of Virginia, worked to
eradicate indigenous species (human and nonhuman alike) which were deemed “savage.”
Here local ecologies were colonized and standardized building materials began to flow
from the region along the Ohio River.

One of the first domestic building materials to exit the Ohio River Valley was
timber. To ensure that the cut timber made it down river, early loggers built “splash
dams” from undersized trunks and branches. Each spring, when the gorges and river
banks became swollen with rain, loggers would break the dams and begin their trek on
foot as timber floated downriver.59 These “log runs,” as they were called, were dangerous
places. To identify timber at the mill, loggers relied on distinct brands hammered into the
end of each log, so the practice of commandeering logs to swap brands became common.
Disaster also struck as men were caught under rocks in the gullies or carried away on the
crest of a spring tide. More common, though, was the loss of limb while they worked, with long u-shaped cant hooks and hand spikes, to free jammed logs caught in the shallows and rapids. Although the log runs and timber sales promised paying work, the practice, as Appalachian folklorist Henry Caudill writes, left “in its wake legions of maimed men, widows, and orphans.”

As loggers, surveyors, and settlers made their way into the Ohio River Valley, they adapted European architecture to a new climate. Appalachian homes needed to wick excess moisture to prevent dry rot, deal with a seasonal swelling of clay soil, and insulate the home against drastic temperature changes. For these reasons, a slew vernacular architectural styles including chink and mortar, cordwood, baled hay and sod, and earth plaster proliferated along the Ohio River Valley. What is more, early vernacular builders often augmented these techniques with hand dug cisterns and modified roof pitches to provide ample water and shade during the summer months.

With the expansion of industry throughout the Great Lakes region and the building of the B&O railroad in the mid-18th century, old growth forests were swallowed whole by an unquenchable thirst for lumber, coal, and natural gas. With the introduction of the railroad, loggers no longer needed to float lumber down river along the Ohio. Soon speculators in river towns across the Ohio River Valley (most notably Cincinnati) recognized what profits this “iron road” would bring and began riding on horseback through the mountains to negotiate the sale of these largely untouched forests.

Given the abundance of natural resources, the Ohio River Valley was soon transformed by the Shay locomotive and steam powered loader into a space of corporate
extraction to furnish the first American building boom. Today, local environmental activists, such as Bob Castro, trace the impact of American industrialization on home in the Ohio River Valley, concluding that the diffusion of vernacular styles “was intimately related to the spread of the railroads.” In contrast to architectural digests, such as Lester Walker’s landmark encyclopedia *American Homes*, which conflate Appalachian designs with “crudely built and furnished dwellings [that] require the expertise of a woodsman rather than that of an architect,” cultural geographers, most notably Fred Kniffen and John Rehder, view domestic folk architecture as cultural artifacts that reflect social, material, and historical conditions. For these architects, Appalachian dwelling has always been part and parcel of a larger extraction economy of coal, lumber, clay, and natural gas.

For nearly 200 years mining, logging, and other natural resource extraction founded daily life in southeast Ohio. Beginning in the late 1980s, however, natural resource extraction jobs that once powered America’s industrial revolution began trickling out of the Ohio River Valley. Today, in place of industry (and therefore employment), “broad-based citizen/industry/government programs” such as the Appalachian Regional Reforestation Initiative (ARRI) have begun “rehabilitating” ecosystems lost to mineral extraction. In 2007 year alone, ARRI planted of some 12.8 million trees (most of them white pine) at abandoned coal surface mines. Yet, as noted in a 2009 White Paper presented to the National Meeting of the American Society of Mining and Reclamation, ARRI officials argue that “serious cultural barriers and other impediments to proper surface mining reforestation remain pervasive in the Appalachian
Although some Ohio River Valley supporters of mineral extraction do engage, as Shirley Stewart Burns argues, in a political othering of environmental activists as culturally un-Appalachian, blanket statements about “serious cultural barriers” downplay the role that federal agencies and other private/public consortiums have had in the systematic exclusion of Appalachian voices from discussions of land management and conservation.

Evicting people from their land to strip mine it before planting non-native species as an act of “reclamation” is not stewardship. Rather it is an extension of logics of domination that historically structured both polis and oikos. Moreover, when residents of the Ohio River Valley express concerns, they are often labeled as backwards, ignorant, or pro-coal shills. Unfortunately, the history of environmentalism in the Ohio River Valley does not differ substantially from larger logics of domination-through-extraction: outside organizations enter Ohio, West Virginia, and Kentucky; diagnose a problem (or profit); and then threaten, cajole, or silence opposition.

In contrast, my participants are wholly invested in the ecological health of the Ohio River Valley because it is their history, and they build homes in opposition to a prevailing orthodoxy of what the western notion of home “is.” Specifically, through the design and domestic habits of their homes these individuals reinterpret home as a space of care and equality. As many of my participants are fond of saying, “live simply so that others make live.” The next chapter expands this sensibility to envision domestic space as a material ecology of human and nonhuman forces. Within this network of action/reaction, everyday actions combine with larger geological, historical, and
ideological forces to alter ecosystems in the service of dwelling. It is an approach that moves away from temporality to examine home as a rhythmic space of habit and affect.
Domestic Material Ecologies and Affective Response

As a space of consumption, home exists as both space and habit. We build home, but we also cultivate domesticity as we draw forth food, water, and resources in the service of dwelling. For this reason, vernacular homebuilding techniques—such as passive solar design (see Figure 6), rainwater entrapment, or cob building—root domestic habit in a mindful consumption of resources. As I’ve learned from my participants, when you grow your own food, compost your own manure, and harvest your own building supplies, you take a special interest in how human habit structures life within an ecosystem.

This project theorizes how everyday matter, species, and habits circulate within domestic space to produce a material ecology of home. Material ecologies are specific iterations of space-time that generate patterns of action/reaction as organisms interact.
with their physical surroundings through cycles of birth, growth, and decay. Material ecologies may be large or small: The last ice age during the Pleistocene was a material ecology, but so is an old-growth forest that has been clear cut for mining. Regardless of size or scope, material ecologists pay special attention to how matter circulates “along and inside” bodies within an ecosystem to become what political and affect theorist Jane Bennet terms “vibrant matter.”¹ Vibrant matter may be either living (i.e., biotic) or inert (i.e., abiotic). In any case, as catalysts for growth and decay, vibrant matter makes dwelling possible.

As a “knotted world” of cross-species interaction, vibrant matter flows through material ecologies “in different bodies in different ways to produce patterns of effects that are not fully predictable.”² For example, in Fernald, OH, within 10km of twin K-65 storage silos containing radioactive refuse from the Feed Materials nuclear weapons plant, the Center for Disease Control (CDC) estimates that 85 people died from lung cancer due to radon decay.³ Here, radioactive waste, as vibrant matter, maps networks of consumption/decay to fundamentally alter dwelling as a process of ecological transfer.

Sometimes it is easy to limn out the effects of vibrant matter in the Ohio River Valley. When you build an off-grid home for instance, you attune to the ways that logging, glacial sediments, or dragline excavators, like the 27-million-pound behemoth “Big Muskie”—which helped put 16 percent of Southeast Ohio’s workforce out of work—extract vitality from one place to create conditions of prosperity in another. But sometimes material ecologies bloom in ways that make it hard to determine causal influence or agency. So, I’d like to begin this chapter by describing one such iteration of
vibrant matter described by a participant named Alex at the end of our interview after I asked him whether he had anything else to share,

Alex: I think we touched on most of it. I’m sure I’ll think of things later. But it’s good and it’s given us an opportunity to think a little more about how far this has come.

Sean: Yeah.

[laughter]

Alex: I’ll tell you something interesting. Before, when we built this, this was barren hill, right, this was a true agricultural field and we used to have a big problem with lightning up here and we’d actually—Do you know what ball lightning is?

Sean: No.

Alex: Or ghost lightning? We’ve actually had lightning, these charged plasma balls that would just drift through the house like ghosts on a number of occasions when there were no trees around.

Sean: Yeah?

Alex: I have a shop building out there that’s got a rammed earth base. It sustained a lightning strike. So, there were some eerie things happening up here with lightning, when we first moved here.

Sean: Yeah. It’s fitting that we’re having this conversation today, then [during a thunderstorm].

Alex: We don’t have it anymore, with the trees around.
Sean: So, when that, that ghost lightning. Is it extremely dangerous, when it comes through, or?

Alex: You know, I stayed away from it.

[laughter]

Alex: When you see this purple ball drifting through the house, I don’t think you’re ‘gunna go up and shake hands with it.

Sean: No.

[chuckle]

Alex: It’s like, “Holy shit!”

Later, when I began transcribing I wasn’t sure of what to make of my conversation with Alex. Southern Ohio can be a place of tall tales, and this one seemed goliath. Charged plasma balls that drift through a house like lonely souls? Was Alex simply spinning a yarn? So, I spent the next month immersed in the world of ghost lighting. Reading firsthand accounts of the phenomenon; researching its causes and effects; and revisiting my field notes from a stormy day in July.

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Ghost lightning, also known as “ball lightning,” is an unexplained weather phenomenon so rare that it was not captured on film until 2014. According to a 2012 paper published in the *Journal of Geophysical Research*, microwave radiation from thunderclouds, nuclear energy, dark matter, and “plasmoid” electromagnetic force have been hypothesized as potential catalysts. In fact, prior to modernity, ghost lightning was recorded only a handful of times throughout history, most notably by sailors who
believed the violet hissing orbs to be heavenly fires sent by their patron Saint Elmo. As an ecological occurrence then, ghost lightning serves as a reminder that, sometimes, humans are just along for the ride.

~

I had a dream, which was not all a dream.
The bright sun was extinguish’d, and the stars Did wander darkling in the eternal space, Rayless, and pathless, and the icy earth Swung blind and blackening in the moonless air

—Lord Byron, *Darkness*, July 1816

On Thursday February 20th, 1817, the surgeon James Braid set out on horseback to visit a patient six miles away from his home in Leadhills England. Two years earlier, Mount Tambora erupted over the Dutch East Indies, sending an estimated 100 km$^3$ of volcanic debris into the atmosphere.$^6$ (By comparison, Lake Erie, the smallest of the Great Lakes, has a total volume of 484 km$^3$).$^7$ Post eruption, close to 100 million tons of sulfur dioxide rose in a noxious plume nearly 28 miles tall.$^8$ To feel Mt. Tambora quake under foot would have been terrifying—to experience its vibrant matter, far worse. As dense clouds of gas and volcanic ash rose into the atmosphere, global temperatures plummeted to the second coldest year on record since 1400. On the subcontinent acid-rain typhoons wilted staple crops and Europe suffered its worst famine of the 19$^{th}$ century as English potato, wheat, and oat farmers lost the growing season to June snowstorms and frostbite.$^9$ Even a full 12,000 miles away on the northeastern US seaboard, Mount
Tambora bathed New England in a luminous orange glow of suspended sulfate for three months.

For many, this “Year Without Summer” was a sobering reminder of Mother Nature’s unbridled power. In fact, today, the toxic atmosphere produced in the wake of the eruption is credited as the affective genesis for the brooding style of both Lord Byron’s *Darkness* and Mary Shelley’s posthuman thriller *Frankenstein*. But for James Braid, Mt. Tambora was also a first-hand lesson about how ecological forces sometimes coalesce in unanticipated ways. In the driving rain, Dr. Braid hunched forward in the saddle bringing his chest close to the horse’s withers as he braced himself against the wind. Relaxing his grip on the reigns, he pushed his horse to a gallop as clouds shifted overhead, turning the sky the color of a dark bruised plum. As rain gave way to hail, James Baird witnessed the rarity of ghost lighting. His horse’s ears began to glow as if they were two burning candles and James watched sparks cascade from the bridle and bit as both horse and rider were momentarily transformed to galloping electric specters. As the doctor recounted two years later in *Blackwood’s Edinburgh Magazine*, “I had no sooner got on back horseback than I observed the tips of both the horse’s ears to be quite luminous: the edges of my hat had the same appearance.”

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In a material ecology, phenomena like ghost lightening represent fleeting *assemblages* of vibrant matter that crop up in an instant to drastically alter rhythms and habits within an ecosystem. As Deluze and Guattari note within *A Thousand Plateaus*, “an assemblage is precisely this increase in the dimensions of a multiplicity that
necessarily changes in nature as it expands its connections." As a philosophical lineage, assemblage-based theories of matter draw from thinkers including Baruch Spinoza and Gottfried Leibniz who opposed a deterministic parsing out of matter along subject/object relations. In turn, these individuals recognize that when we alter mater in a material ecology, it pushes back. Within a material ecology then, assemblages of vibrant matter coalesce through patterns of action/reaction to produce unanticipated consequences.  

When I began researching ghost lightning I did so to determine if Alex was telling the truth. What I found though was a phenomenon so ephemeral that is impossible to trace in terms of actor/network or subject/object. Ghost lightning is impossibly rare. But it is also a phenomenon, like a home, that is impossible to think of as a singularity. When we build home, we alter nature to spawn new patterns of action/reaction in the service of dwelling. No home exists outside of this material ecology.

Today, scientists are confident that humans influence global patterns of ghost lightning. Notably, physicists note that large modern structures (notably airplanes, ships, and buildings) seem to generate ghost lightning under certain atmospheric conditions. Yet, in part due to the fleeting nature of ghost lightning, it remains impossible to empirically control, test, or model the phenomenon. To experience ghost lightning is to be among shifting material ecology that stands apart from everyday experience, yet is, at the same time, thoroughly implicated by everyday habits of dwelling. Like home, ghost lightning is an articulation of vibrant matter that swirls through time and space in a material ecology of more-than-human forces.
Rather than parse out who “counts” as domestic actors then, I regard ecological patterns of home in three ways: 1) As rhythms with well-worn ecological paths of travel; 2) as habits that represent the adoption of daily patterns of action by organic, living matter; and 3) as cadences, which represent underlying earth system cycles (e.g., petrification, decay, and erosion) founding the primordial conditions for all life within an ecosystem. Therefore, as a complement to scholars, such as Serenella Iovino and Serpil Oppermann, who theorize a material ecology as a duo-fold, “diptych” process of ecological postmodernism and new materialism, this project traces dwelling relative to an everyday triptych of rhythm, habit, and cadence. It is a vision of domestic habit that abandons the philosopher’s quest for “essence” for the study of how homes in the Ohio River Valley—and the people who live there—become extended through space and time to alter ecosystems.

Agency, Cause-and-Effect and Habit Within a Material Ecology

As matter (human, non-human, or otherwise) enters an ecosystem, it demonstrates the concept of distributive agency, which as Bennet notes, cleaves the thinking, feeling, “subject” as the root of an effect. As articulations of distributive agency, ecological transactions like ghost lightning, deforestation, or contamination alter ecosystems in ways that complicate anthropocentrism. To account for this distributive agency then, Bennet suggests a posthuman expansion of the body politic to include nonhuman actors,

If human culture is inextricably enmeshed with vibrant, nonhuman agencies, and if human intentionalty can be agentic only if accompanied by a vast entourage of nonhumans, then it seems that the appropriate unit of analysis for democratic
theory is neither the individual human nor an exclusively human collective but the (ontologically heterogeneous) ‘public’ coalescing around a problem.\textsuperscript{18}

In response to patterns of extraction, domination, and contamination within the Ohio River Valley, I interpret Bennet’s call to articulate a more-than-human “public” through habits and stories of home. As I illustrated in my literature review, western philosophy has traditionally bifurcated dwelling along dichotomous ontologies of public/private, human/nonhuman, female/male, subject/object, home/away and structure/agent. Underpinning these constructs is a distinct parsing out of control to determine causal direction. To speak in the \textit{polis}, you had to control the \textit{oikos}; to be human you had to exert dominion over nature; and to be a subject is to manipulate objects. In contrast, material ecology avoids binary formulations of control to thinking to complicate the idea of “agency” though nonhuman patterns of action.

Agency is not the same thing as cause-and-effect. A material ecology may complicate agency, but it does not dispute underlying casual mechanisms that emerge over time as matter furiously cycles through bodies in space. Ghost lightning aside, in 1815, a volcano erupted over Indonesia. The next year, global temperatures plummeted, 50 km\textsuperscript{3} of magma was released, and 71,000 people died. As an extension of this principal of cause-and-effect, events within a material ecology have consequences for the health of an ecosystem. When we clear cut old-growth forests for timber, remove topsoil in a search for clay, coal, or natural gas, or contaminate water through industrial fabrication, human habits of dwelling shape life regardless of whether we anticipate the consequences of this action. More than anything then a domestic material ecology examines how
humans interact with space over time surroundings to privilege certain habits, affects, and ways of sensing home. We taste home, smell home, and feel home rub up against us in ways that Stewart describes as “surging capacities” that are across species.¹⁹ In sum, we know home because we consume it.

Although material ecology may muddy a sense of human agency, it does not shy away from the thing-power of everyday actions and objects that “course through humans and cultures without being exhausted by them.”²⁰ For my participants, this takes on special significance when the effects of American domesticity become etched in the landscapes of their homes. For instance, Lance, a former highway construction worker, links his rationale for building an off-grid home to unconscious habits that he believes structure dwelling-as-consumption:

I know everybody here has different ideas about what their home is about, but mine is mostly resource using. My mom is horrible—they have a hot tub. They’ll leave the cover open, and their electric bill is ridiculous, but they don’t see it. They don’t put together that that’s coal burning around your house. And I’d rather turn off lights, use LED bulbs. I think I read [a statistic] where if every household in the United States switched one incandescent bulb to a compact fluorescent, it’d be enough power save—er, shut down one coal power plant.
Failure to consider the thing-power of domestic objects through habit lends itself to what another one of my participants who had recently returned to the electricity grid labeled a “death by 100 cuts.” For homebuilders like Lance though, everyday items—such as incandescent lightbulbs, hot tubs, and coal—transcend human manipulation or control. We “use” coal, but as vibrant matter, it enacts thing-power through a history of unanticipated consequences including labor exploitation, polluted water, and extinction. In this sense, material ecology marks a return to Henri Lefebvre’s pronouncement that “architecture creates living bodies each with its own distinctive traits.”21 As an extension
of this premise, material ecologists examine how patterns of consumption become engraigned over time through architecture and habit.

The Body at Home

In terms of the health of an ecosystem, not all habits are created equal. Likewise. although domestic habits are, by nature, a subconscious attunement of the body to space, it is a mistake to think that they begin or end with the body. The body exists in space and is habitually conditioned by it. For this reason, I do not think of home as separate from the body. Once realized, a faucet, an outlet, or a toilet represents points of entrance and departure as bodies are shaped through daily acts of consumption. Here, poorly designed homes decimate others to shelter some.

Teflon pans. Black Walnut tables. Composting toilets. Home is a curious mixing of bodies and objects. But homes are no accident. Architecture petrifies certain ways of being as we interact with kitchens, bathrooms, and bedrooms to usher in profound ecological changes. As I intend to show throughout this project, the Ohio River Valley lays at the epicenter of a toxic form of late stage capitalism, which accepts the contamination of an ecosystem as a cost of doing business. Here, actions that produce an American standard of living have material consequences for local lifeforms. It is a tragedy of the commons that often goes unnoticed as we dull bits of vibrant matter (e.g., coal, water, lumber, and dirt) through modern rhythms of consumption that, as Iovino and Oppermann note, traverse human and nonhuman bodies alike:

New materialists see the “dance” of matters and meanings in the entire worldly reality: in the behavior of subatomic particles, in the co-evolutionary dynamics
that characterize the paths of life on earth, in the way the combination of toxic substances and “toxic” practices produces toxic places and toxic bodies. The direction taken by the material turn is therefore more than merely socioeconomic: in fact, it is as broad and foundational as the scope of those ancient peri physeos poems in which all the forms of existence—nature, society, knowledge, humans, nonhumans—were taken back to their very condition of possibility: embodiment.22

When applied to home, material ecologies serve as a reminder that, as Patricia Yaeger writes, “domestic matter within the oikos or home rolls under, beneath, and inside edicts of state and free market capitalism” to make this space, “vulnerable to capital.”23 What material, ecological approaches to home “do” then is map a tangled unfurling of vibrant matter that operates as part and parcel of larger ideological, biological, and historical forces: Habituation of individual to space, space to architecture, and architecture to material ecology—this progression represents the steady accretion of habit to imbue architecture with ideological significance. Homes are moved through and experienced, but, above all, lived in.

Save for naturally occurring shelters, domestic spaces are built for individuals, and thus express specific features to aid in the consumption of resources. As a verb, domestic material ecology thus begins with vibrant matter at home—say a hand-hewn poplar beam—to follow the rhythms, twists, and tangles of dwelling as materials are extracted, changed, and reintroduced into circulation. As a result, I think of material ecology as a rhizomatic approach to critical theory that roots dwelling along a network of
unpredictable offshoots. Sometimes these rhizomes emerge unpredictably in moments that, like ghost lightning, are instable, transitory, and fleeting. Other times, like honey suckle, kudzu, or quaking aspens, domestic rhizomes spread their tangled roots through ecosystems to create the kinds of structures that Deluze and Guattari describe as “an immediate, indefinite multiplicity of secondary roots grafts [that] undergo a flourishing development.”\(^{24}\) And finally, some rhizomes of home in the Ohio River Valley—e.g., bituminous coal or hardwood forests—draw deep taproots from material conditions (e.g., soil and water quality, sunlight, or the TVA) to map histories through “multiple, lateral, and circular systems of ramification.”\(^{25}\) Importantly, rhizomes of vibrant matter establish an ever-changing “order of things” rooted in physical matter. A rhizomatic approach to material ecology thus acknowledges the error of representation as a stable, historical phenomenon. As Deluze and Guittari write,

A rhizome as a subterranean stem is absolutely different from roots and radicles.

Bulbs and tubers are rhizomes. Plants with roots or radicles may be rhizomorphic in other respects altogether [for instance as a building material]: the question is whether plant life in its specificity is not entirely rhizomatic. Even some animals are, in their pack form. Rats are rhizomes. Burrows are too, in all their functions of shelter, supply, movement, and breakout. The rhizome itself assumes very diverse forms, from ramified surface extension in all directions to concretion into bulbs and tubers. When rats swarm over each other. The rhizome includes the best and worst: potato and couchgrass, or the weed. Animal and plant, couchgrass is
Roots, rats, and burrows. No matter the organic structure of a rhizome, material ecologies map this circulation of vibrant matter through daily perception and habit. By necessity then, material ecologies consider dwelling along a posthuman continuum of other species. As consequence of this lesson, I theorize home relative to specific patterns of cross-species dwelling that spawn inhuman ecological forces. In sum, I map dwelling along an all-encompassing rhizome known as the Anthropocene.

Home in the Anthropocene

Building home alters life around it. My participants tell stories of bulldozers, shovels, and rubble trench foundations. When Alex clear cut a ridge in Meigs Co., he unknowingly created conditions for ghost lighting. And over time, as saplings gave way to a new-growth forest though those “purple balls of plasma,” as Alex describes them, faded with every rainy season.

This study of home is sensitive to temporal change. In a material ecology change is inevitable as landscapes, species, and vibrant matter are altered by domestic habits. As a result, my participants pay special attention to the impact of their home on local ecologies. In their own way, these individuals grapple with the material realities of post-industrial dwelling in the Ohio River Valley. Factories. Killing floors. Climate Change. Coal. Automation. Solar Panels. These are the rhythms, habits, and cadences of home in a time when humans interact with our surroundings in new and profound ways.
At the most basic level, ecologists study how organisms relate to their physical surroundings. In large part then, ecology concerns itself with transgenerational change though sustainable rhythms including growth, consumption, petrification, erosion, and decay. Over the course of time, however, when entropy reaches unsustainable levels, unbridled change may occur within an ecosystem. Ecologists, refer to these life-changing events as secondary succession, and William Cook’s co-authored article in a 2005 issue of Ecology, opens with an equally apt description of the phenomena: “Secondary succession reflects, at least in part, community assembly—the sequences of colonization and extinctions. These processes in turn are expected to be sensitive to the size of the site undergoing assembly and its location relative to source pools.”

Historic examples of non-anthropocentric secondary succession include the 10-km-wide meteor, which created the Chicxulub crater before eviscerating 75 percent of Earth’s flora and fauna, as well as the volcanic eruption on Mt. Tambora some 66 million years later.

Material ecology complicates the idea that humans “fashion” nature in our own image through a detailed study of how vibrant matter pushes back. At the same time though, material ecologies do not deny that we, as a species, have a disproportionate impact on the environment. Today, we are the primary catalysts of secondary succession. In this new epoch, known as the Anthropocene, humans are the ultimate arbitrators of ecological rhythm. We gestate death (industrial slaughterhouses kill and process approximately 10 billion animals annually in the US), climate change (in 2010 humans released nearly 45,000 million metric tons of greenhouse gases into the atmosphere), and wide-spread contamination (as you read this toxic algae blooms from nitrogen fertilizers...
threaten 21 percent of Earth’s surface freshwater contained in the Great Lakes) at unprecedented levels. Secondary succession in the Anthropocene is very much a story of unintended consequences as humans strive to remake nature in “our” image.

When we push matter, it pushes back. On a material level, it is a premise encoded in Newton’s third law of motion: “for every action there is an equal and opposite reaction.” But as the prime movers of earth systems, humans have progressively etched unsustainable habits of dwelling that extract capital, resources, and life from one area to provide conditions for growth in another. Already, as Guattari writes, anthropocentric developments including, “Chernobyl and AIDs have dramatically revealed to us the limits of humanities techno-scientific power and the ‘backlash’ that nature has in store for us.” Likewise, dwelling in the Ohio River Valley attunes you to everyday examples of human-induced secondary succession etched in the cratered landscapes of former mines and logging tracts.

As sociologist John Bower writes in his 2017 essay on the Anthropocene, the implications of this new form of secondary succession are tri-fold:

Taken together, the term [Anthropocene] implies (1) that we have entered a new planetary epoch, one in which human activities have become significant drivers of all major earth systems, (2) that the massive scale of these processes and inertia present in these systems suggest they will continue down the human influenced trajectory, potentially in ways that are disastrous to the planet and our species and hence, (3) that human societies will need to change in new and unprecedented ways—both to adapt to forthcoming changes we have unleashed and to transform
our activities in a manner that minimizes and begins to ameliorate our role as fundamental drivers of these earth systems.33

I prefer to trace home in the Anthropocene along a curious movement of matter in service of dwelling. Thus, my vision of domestic ecology maps rhizomes of unintended material collisions to include ghost lightening, rats that carry toxoplasmosis or the plague, invasive *Amphibalanus amphitrite* barnacles colloquially named after Charles Darwin that cling to the sides of ships, the indigenous clear-burning of the Great Plains, and the smoot-smudged skylines of heavy manufacturing. But in the Ohio River Valley, these more-than-human rhizomes also include underground mine fires that still smolder a hundred years later, tainted aquifers, and homes built from materials that others throw away. In their own way, each of these rhizomes testify to human modes of dwelling as a *keystone species* integral to the current state of our ecosystem.34

The Anthropocene, like all geological epochs, deals with change of earth systems.35 In his 2016 article, “Getting the Anthropocene so Wrong,” Clive Hamilton argues that earth systems are not the same as ecosystems, although the former found a necessary condition for ecological development. In comparison to ecosystems, earth systems comprise the most fundamental units of composition that circulate between abiotic (non-living) matter:

The various parts of the Earth system – rock, water, atmosphere – are all involved in interrelated cycles where matter is continually in motion and is used and reused in the various planetary processes. Without interlocked cycles and recycling, Earth could not function as a system. . . . In the last fifty years or so we have
come to recognize the movements in all Earth’s layers, including the plates at the
surface, the mantle and the core as well as the atmosphere and ocean. Earth systems found underlying ecological cadences. Moreover, although earth systems may spark ecological succession in an instant (like the eruption at Mount Tambora) their history is measured in gradual change over billions of years. Cadences—as a temporal cycle—testify to the fact that the ecosystem we experience today is but a thin, fragile sliver of existence: It took nearly 10 million years for modern humans to evolve from our earliest predecessors, and “we” have been a distinct species for about 200,000 years. This concept of Deep Time (as opposed to the embodied temporality of everyday rhythms of this project) maps a frequency of cadences so old that if Earth’s geological history were charted as a trip to the moon and back (i.e., 477,710 mi), human influence would account for the last 3/4 mile of orbit. For this reason, I believe that a domestic material ecology of the Ohio River Valley is best articulated in terms of rhythms, cadence, and habit. Under this interpretation, home becomes a space of patterned repetition over time (i.e., rhythm) and my participants build with vernacular techniques to cultivate (rather than disrupt) natural material cadences through daily habit.

An Affective Material Ecology?

As applied to dwelling, architect Neri Oxman describes material ecology as “an emerging field in design denoting informed relations between products, building systems, and their environment.” At MIT’s mediated matter research group, Oxman designs products and buildings that are “biologically informed and digitally engineered by, with, and for, Nature.” Through aesthetic design, her team nurtures nascent biological
structures in the service of dwelling. Today, in a digital age, this material ecology represents a cutting-edge approach to problems of the Anthropocene. But outside the computational realm—where humanity extends its presence outside of binary code—there’s nothing novel about the idea that humans should dwell in symbiosis with vibrant matter. In fact, you probably encounter such cross-species sociality daily: Corn, dogs, and gut flora all represent symbiotic *companion species* that have adapted with humans through rhythms of domestic consumption. For these species, the Anthropocene is nearly as old as civilization, and as Bowden notes, “human impact on the environment was evident as long as 50,000 years ago and sped up significantly with the spread of agriculture and urbanization.”

As a result, I think of domestic architecture is an important rhizome of the Anthropocene. 2,000 years before Chinese scientists at the Beijing Weather Modification Office launched rockets containing silver iodide into the atmosphere to ensure that the 2008 Olympic Games would be rain free, emperor Qin Shi Huang began construction on the Great Wall with rammed earth. Likewise, 1,000 years before the dragline excavator nicknamed “Big Muskie” moved twice the earth excavated during construction of the Panama Canal while it strip-mined over 100,000 acres of southern Ohio, Fort Ancient builders aligned the oval head of their 1,348-foot earthen Serpent Mound with the summer solstice and equinox.

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A wall to keep out barbarians. A serpent. A mound. In a material ecology, we are the sum of past lives and places matter circulates through trans-generational rhythms.
Here, objects and memories—even the new ones—can resurrect long lost rhythms and habits, a kind of cross-generational etching of experience between the living and the dead that, as Devika Chawla notes, are traceable through affective rhythms of daily habit:

A habit is traceable. It is traceable because it is repetitive. In repetition, we create routines. In repetition, we create rituals. Habits, rituals, and routines are performed in and by our bodies—by us—in space and time. A habit is a doing and in that very activity of everydayness, routine, and doingness, it enters the realm of the performed life. In a way, habits as rituals as performances, restore us into ourselves. Both imitation and invention, they are material actions that can sediment as well as transform, that is, they can keep us hinged to pasts, but that very hinging can also remake us.43

A material ecology of home traces domestic habits in swirling eddies of vibrant matter that make and remake us daily. As consequence of this affective arithmetic then, I am drawn to study the relationship(s) between home, memory, and larger historical traditions and ideologies. I see home as a historical cache of sorts—like a time capsule, the methods, practices, and traditions surrounding a home’s construction tell a great deal about the life of both builder and dweller. What happens, for instance, when a couple decides to build their home out of trash? What rhythms are awoken when a man sets out to revive a building practice older than written language?

In daily habit, forces of home are manifested in ways that, as Gaston Bachelard notes, “do not pass through circuits of knowledge.”44 As habit then, everyday actions—for instance drawing water for tea or taking out the trash—do not percolate through
conscious perception. As (sub)liminal performances of home, domestic habit does not travel in a representational manner of Form and Content. Rather, this “circuitry of affect,” tears at the tripartite braid between analytical subject, concept, and world. The result is a surging capacity to affect and be affected by everyday life. Applied to the home, a material ecology of affect requires envisioning dwelling as a “bloom space” of habit, reaction, and pre-emotional impact. As Stewart describes,

> When you enter the room, you feel the angles flooding in, the luminescence of an ordinary but prized style of being present. A cross-modal force of synesthesia. A becoming sentiment to a way of being, an experience of community in terms of what it makes possible. An intimacy tied to the mood of a place. A vibe.

As a material ecology architecture implies that domestic affects are, to borrow the words of Donna Haraway, “a knot in motion.” To unravel this knot then is to discover how human and nonhuman forces are combined, taken apart, and put together in processes that “make self-certainty and either humanist or organicist ideology bad guides to ethics and politics, much less to personal experience.” It is this scripted dance of life-matter, which Haraway refers to as “ontological choreography,” that influences our affective rhythms with vibrant matter through domestic habit.

As a way of considering the impact of matter on the body, affect theory is both a reaction to modernism belief that the world can always be captured as analytically, as well as postmodernism’s attempted homicide of the subject. Affect is a return to the perceiving agent as a “shifting assemblage of practices that suggest capabilities to affect and be affected.” The power of affect—as primordial and pre-cognitive—stems from its
ephemerality: affects may “snap into effect” or exist as a “surging rubbing connection.” Yet, as Patricia Clough notes, circuitries of affect need not be restricted to stable, organic, or human life. Thus, the resonance of ordinary affects arises from an liminal “in-betweenness” of ecological circulation as affects are found “in those intensities that pass body to body (human, nonhuman, and otherwise).” As a result, affect theory privileges the study of pre-emotional and pre-ontological forces that ebb and flow in singularities to provide, as Lauren Berlant notes, “non-universal [yet] general abstraction for how we learn to identify, manage, and maintain the hazy luminosity of being, living, and interacting.” An affective turn decenters humanism’s subject as a self-contained epistemic arbiter, replacing dispassionate empirical observation in a swirling world of human, nonhuman, and material interaction. Applied to the study of home, affect-based theories of representation suggest that home is not a deadened object of analysis but a vibrant ecological space of cross-species interaction. Domestic identity, habit, and action are thereby derived from this daily mixing of matter.

Affective ecologies allow for a rethinking of the possible—from representational meaning to post human, “more-than-representationa”l spaces that “envelop” and “press upon” life. This atmosphere, in the writings of Kathleen Stewart, manifests itself: not [as] an inert context but a force field in which people find themselves. It is not an effect of other forces but a lived affect—a capacity to affect and to be affected that pushes a present into composition, an expressivity, the sense of potentiality and event.
An ecological approach to affect envisions the contingent foundations of perception as a churning livelihood that exerts force on those surrounded by it to provide the depth, character, and conditions of life. As a largely ineffable experience though, this phenomenological refrain of *worlding* contains within it *quantum indeterminacies* fundamentally opposed to the true/false dichotomy of axiomatic, proof-based representation. As Ben Anderson argues, everything here depends on the location, attunement, and biological affordances of the perceiver as affects change frequency relative to temporal and spatial surroundings.

As a process of worlding, theories of affect contain an implicit phenomenological premise that beings do not preexist their relations. Within a material ecology, we are a sum of relations, caught in a continual whirl of organic and inorganic contingencies. Affect theory thus resists the philosophic habit of “. . . parsing the world into dull matter (it, things) and vibrant life (us, beings)” in a call to reject subject/object dualism, not just in theory, but also in the practice of everyday life. In place of Descartes’ *res cogitans* and *res extensa*, we attend to the vibrancy of all affects—not just human. We take seriously the ability of material objects to act as “quasi agents or forces with trajectories, propensities, or tendencies of their own.” As a source of action, this vitality of life can be either human, material, or nonhuman. Formal questions of distinction between subject/object, home/away, and material/discursive forces are thus set aside for a detailed study of affective circuitries where humans interaction with the world around them. Rather than ignore the interdependence of beings in dwelling, theories of affect recognize the multitudnal character of affective atmospheres to shape home as a place of memory,
sensory perception, material imbrication, and architectural experience stabilized over space-time through domestic habit. Through vernacular architecture my participants engrain specific habits that teach them to care for the health and vitality of a shared ecosystem.

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Material ecologies trace rhizomatic affects that, like the experience of ghost lightning, crop up in an instant to alter the meaning of home. Too often though, writing on home ends up flattening dwelling to a kind of personal or nostalgic memory as we slip inward to realm of sentiment and forget home’s impact on others. At worst, this practice of navel-gazing trends towards a western pathology in the reduction of presence to a banal, maudlin litany of remembrance.

A return to rhythm is one way to ensure that a material ecology of home stays vibrant so we don’t forget that dwelling is, and ever shall be, a space of cross-species socialization. But an emphasis on architectural rhythm is by no means novel: Goethe, for instance, declared architecture to be “music frozen in space.” Nietzsche, in reaction to this idealism, believed it an art rooted in a will to power as architects historically attempted to defy gravity and natural order as a rhythm of “power-eloquence” taken against underlying cadences of eternal recurrence. And finally, Heidegger, as a neo-Kantian phenomenologist, maps dwelling as a natural extension of being-in-the-world. As a consequence of German Idealism (an ideology of anti-materialism that I find particularly fascinating), Goethe, Nietzsche, and Heidegger provide an account of dwelling-through-architecture that highlights the practice as an aesthetic, communicative
medium. Yet, the trio—in varying shades of allegiance to Kant’s premise that knowledge is circumscribed by empirical perception, ironically neglect the functional and pragmatic features of architecture in everyday life. The rhythms founding their homes are, for the most part, speculative and metaphysical.

Under this idealized rubric, sound architecture achieves balance between competing demands of commodity, firmness, and delight, and well-laid spaces should shelter human activity, resist gravity and the elements, and exist as an object of beauty.67 Homes are not to be messy, deadly, or unsightly, and, as architect Witold Rybczynski notes, a successful synthesis of these elements transforms architecture to a kind of representational language of aesthetic space. To a certain extent, the history of cathedral construction, political edifices, and public “reclamation sites” (such as AEP’s 60,000 acre “ReCreation Land” located over a defunct Ohio strip-mine) testify to this representational, semiotic nature of place. By design, buildings, museums, and furniture express ideas.68

Yet, as Rybczynski concludes, “buildings are more than intellectual creations.” Architecture exist through time, enduring climate and geography to take on vernacular significance. As a result, homes alter or amplify rhythms of dwelling. In this way, architecture fulfills what Heidegger terms an “equipmental” (das Zeug) function by predisposing the individual to take certain actions as a result of design.69 As I grasp a well-worn handrail, for instance, it does not appear to me to consider how implicit OSHA ergonomics of modern dwellings vis-à-vis the height of the hand rail (“no more than 37 inches nor less than 30”) in relation to the staircase, or the angle of its pitched descent
(“30 deg. And 50 deg. From horizontal”) structure dwelling. And likewise, when I flip on a light switch I might not think about how that power got there (most likely fossil fuel extraction) or what died to make this transaction possible.

For this reason, I root this study of home in the material premise that, as Marx writes in his 1884 “Theses on Feuerbach,” “the human essence is no abstraction inherent in each single individual,” but is an “ensemble of social relations” wherein “All life is essentially practical. All mysteries which lead theory to mysticism find their rational solution in human practice and in the comprehension of this practice.” For Marx, this return to human practice necessitated an ecological fusion evolving material interrelations between humans and nature that he termed “metabolic relations.” Caught up within this material ecology then events the design and everyday habits of home remake humanity and nature through coterminous processes that, like ghost lightening, crop up over time to alter human/nonhuman relations.

Within a material ecology, architecture is more than the aesthetic deployment of space. Instead architecture functions within a material ecology to support certain modern modes of production and existing social relations through habit. Here, I draw from the work of critical theorists such as Henri Lefebvre and Michel de Certeau to consider spatial design and everyday action as inherently linked. As Lefebvre argues,

At the centre [sic], recognized here and elsewhere, is the process of the reproduction of relations of production, which unfolds before one, which is accomplished with each social activity, including the most ostensibly anodyne (e.g., leisure activities, everyday life, dwelling and habitat, the use of space).
In this manner, spatial productions organize “an assembly of possibilities” regarding how we traverse, dwell, and move through architectural space. As a result, domestic architecture is neither reducible to style nor the collective memory and practices of its inhabitants, but is rather a meditation on how the geometries and function of domestic space enshrine habit, cultivate memory, and shape the meaning of home. Uncovering the implicit ergonomics of home thus requires contemplating the purpose and function of domestic spaces. It is a philosophic move from the metaphysical question of “what home is” to a pragmatic disclosure of how home is used.

Architecture, under this rubric, provides a backdrop for human activity; it allows for specific rhythms to develop, inscribing daily action relative to the features of a given space. Buildings are designed for a purpose, and often this purpose highlights underlying political concerns. Parisian architects, for instance, designed the wide boulevards of the Champs-Élysées to quell domestic uprising. In contrast, my participants eschew traditional notions of what home “is” to revive dwelling as a daily process of cross-species care, cultivation of the commons, and concern for the future. In this way, their homes become a more-than-human companion species to structure certain material ecologies of dwelling through daily habit and consumption.

A Rainy Day in Meigs, Co.

On a rainy July day in Meigs, Co Alex told me a fantastic story about ghost lightening. Later, I didn’t know what to believe. Stories of home often tread a quixotic line between truth and falsity. They may crop up in an instant or remain unnoticed for
centuries. Like ghost lightening they are, by nature, ineffable, transitory, and hard to prove.

Mapping a domestic material ecology does not seek to capture—like an entomologist’s killing jar—“the way it really was” but rather “seizes hold of a memory as it flashes up at a moment of danger.”76 As theoretic sensibility then, I embrace a material ecology rooted in everyday domestic habit and vernacular architecture to discover new paths of insight that stem from daily collision of matter at home. Here, a broken scythe, glass bottle, or poplar beam connects affect-materials relations through quotidian acts of dwelling. Like Alex’s story of ghost lightening, these stories act as conduits to a larger material ecology of dwelling.

As a catalogue fleeting interactions, material ecology is a more-than-representational methodology. As a result, subsequent chapters, I rely on “more-than-representational theories,” including affect theory, new materialism, and posthumanism—to move my writing from a text that represents to one that evokes everyday life. Importantly, more-than-representational approaches are not anti-representation; material ecology is not a chance to play hooky or side-step issues of representation altogether. Rather, as a more-than-representational theory, material ecology understands that writing is fundamentally an activity that affixes meaning in discrete ways within a larger circulation of vibrant matter.

What material ecological approaches “do” then is pay credence to the idea that representations matter, that these representations may constantly shift, and that representation itself is influenced by material conditions, which precipitate events well
beyond our control. Here, representation matters because stories matter, and words betray action. In the next chapter, I describe how I approached fieldwork as an embodied attunement to rhythm, habit, and place.
Research Practices: Fieldwork in a Material Ecology

Only on rare occasion did my fieldwork feel methodical. This was not for a lack of trying. The night before every drive, I gathered supplies, laying each item out for inspection: an audio recorder nestled inside a black plastic eyeglass case; spare AAA batteries; clean white copies of my interview protocol and consent forms; extra pens; work boots and a pair of rubber galoshes; my tool belt; a hefty metal thermos; plastic 5-gallon water jugs for off-grid builds; and, finally, a bedroll for overnight trips. Everything neatly packaged and labeled—the *mise en place* of a nervous ethnographer fussing over how many batteries to bring, committing the first topics of conversation to memory, and fretting over what to wear. To shake hands or not to shake hands? Consent form before or after the interview?

There is always fear when we enter a field; the same fear I work so hard to stifle with an extra set of batteries and a well-packed bag. Fieldwork, to borrow a well-known anthropological dictum, makes the strange familiar and the familiar strange. But what does it mean to internalize this as a habit? To write and research in various shades of strangeness—physical, imagined, or otherwise? To place the ethnographer in the midst of known and unknown things? If anything, my time in “the field” convinces me that, as a method, fieldwork is a mode of thinking about phenomena that swirl in a material ecology of bodies, objects, and affects. In this way, fieldwork is an embodied sensibility that emerges from dwelling in a place over time. In the field, we collect data points as we smell things, touch people, and taste food. And then we write about these experiences.
Why stage the tools of this trade? Why fuss over a pencil, a recorder, a set of spare batteries? I realize the answer to these questions nearly four months later when I lose the contents of my tool belt on a build. I treat objects associated with fieldwork with respect because, for me, home is where the tools are. Labor orders matter in the service of dwelling, and efficient laborers recognize necessary equipment: When you hay or scrape paint, you want to set aside a pair of gloves, a bandanna, and a long sleeve shirt. If you drive a truck, a cooler and a radio are a must. Same if you work in production or machinery, but you’ll want to add gloves, earplugs, and possibly a respirator. And if you work with concrete, muck boots (i.e., wellingtons) are indispensable. At every turn, the materials of a field structure an ecology of dwelling. As they say in the Marines, “weapon first, body second—take care of your gear and your gear will take care of you.” When you begin fieldwork, you must be ready to work.

How you get ready for work though tells a lot about what material ecologies you enter daily. Although they are both tools, a recorder is different from a shovel, and, furthermore, the rhythms of spade shovel are alien to a dragline excavator. But today I realize that, while affect-material relations may shift in a second, underlying habits are much less likely to change. When I got nervous before an interview, I pack and inspect my tools just as I would have done for any job.

I believe that the habits our bodies construct over time represent fieldwork as a methodology. In following pages, I describe the habits and embodied sensibilities I cultivated over the course of my fieldwork in the Ohio River Valley. I begin with a meditation on the physical location of my fieldwork to show how Appalachian history
and geography influenced my practice of sensory ethnography. Through anecdotes, stories, and what anthropologist Clifford Geertz terms “thick description,” I hope to instill a sense of what it was like to interact with each participant.¹ Focusing on my participants and their practices also segues to a final discussion of the role of embodiment in fieldwork through what I term “muddy boots” ethnography.

Appalachia as Location and Method

“Ohio stands alongside and directly above the upper part of the southern Appalachians and has been the principal target of genuine hillbilly migration”—Jack Kirby, “The Southern Exodus,” 1983.²

Figure 8: Trapped wolf spider. Athens, OH.

The bio-diversity of the Ohio River Valley is astounding. Over 10,000 species inhabit the narrow band of hills, hollers, and rivers stretching through Ohio, Kentucky,
and West Virginia. What I notice most about the foothills of Appalachia though are the spiders. After cold spring nights, I find daddy long legs in my boots in the morning. Brown recluses fall into the washing machine when you leave the door open, and on sunny days when my wife and I hang our clothes out to dry, cobwebs cling to our linens in silver tendrils.

Spiders weave either funnel webs, which vortex inward to trap prey, or sheet webs, which join crisscrossing snares like tangled skeins of yarn. Funnel webbed spiders are generally deadlier, and on a warm July night when I watch June bugs struggle in webs around my front porch light, I think about how people talk about Appalachia. Like a web, it sticks to you so that you never really leave. Appalachian habits represent a dense web of relations, rituals, and performances that can be impossible to escape, even in exodus.

The easiest way to think of Appalachia—the way most think about it—is as funnel web of poverty. A place where canaries live underground and the scars of Buffalo Creek, the Battle of Blair Mountain, and yellow-dog scabs still smart. A place where Lyndon B. Johnson’s “War on Poverty” was born in the face of poverty rates exceeding 150 percent of the national average. Yet, there is another side to Appalachia that rarely get mentioned. With the signing of the Federal Highway Act of 1956, Appalachian roadways were reborn as webbed routes of exodus, this time luring people away from home. As West Virginia native, Kostis “Shorty” Bongalis, remembers “you had to learn the three r’s—Reading, Writing, and Route 21. And if you couldn’t swim, you better have help crossing the Ohio River.” Between 1950 and 1960, 839,581 “highlanders” migrated to the Buckeye state from Kentucky, Tennessee, and West Virginia. As a surveyor of
Lewis County, WV noted in 1941, “the principal export product of this area appears to be children.”

In some cases, the federal government even built so-called hillbilly highways to encourage migration. For instance, the James A. Rhodes Appalachian Highway, which snakes along the Ohio-Kentucky border from Cincinnati, OH to Parkersburg, WV, was built to encourage travel and economic growth. Regardless of the success of these roadways in revitalizing Appalachia, however, The Great Appalachian Migration had an enormous impact on the Ohio River Valley, dispersing Appalachian customs, language, and history to surrounding cities and towns. In Dayton, for instance, the promise of union jobs at AK Steel, General Motors, Delco, National Cash Register, General Electric, and Frigidaire, drew tens of thousands of individuals, among them my wife’s extended family, to urban Appalachia. There is even an old joke, one that I heard many times growing up, that white folk from Dayton (known colloquially as “briars”) were just rednecks and local yokels too dumb or drunk to find Detroit. Maybe Steve Earle puts it best in his 1986 song “Hillbilly Highway”:

My grandaddy was a miner, but he finally saw the light
He didn’t have much, just a beat-up truck and a dream about a better life
Grandmama cried when she waved goodbye, never heard such a lonesome sound
Pretty soon the dirt road turned into blacktop, Detroit City bound
Down that hillbilly highway
That hillbilly highway
Hillbilly highway
Goes on and on.

This history remains codified in the daily speech, performance, and language throughout the Ohio River Valley. And likewise, Appalachian culture, history, and rhythms inform my methodology. More specifically, the landscape, lifestyle, and habits of rural Ohio shape how I interact and communicate with my participants, all of whom (with the exception of one) grew up in various shades of rural southern Ohio. When I work on Alex and Rachel’s house, for instance, Rachel and I both know to make chit-chat about the hay, trading stories of walking behind the trailer, hay hook in hand, to chase down stray bales in the August heat; stacking bales bound in orange plastic twine while hay needled our forearms; and watching a rust-flaked tractor sputter in the sunset. And likewise, when I’m at Wes’s, I know to grab a fistful of fresh-cut, rolling alfalfa between thumb and forefinger to check if it’s ready to bale.

These are just some of the sensory experiences and habits of the Ohio River Valley that undergird my being-in-the-field. Likewise, these collective experiences transcend farm life to influence my performance of fieldwork. When visiting participants, old combat boots, a white t-shirt, and canvas work pants balance the expectations of Dr.-to–be who still brings the right tools to a build site and knows the difference between Appa-Latch-uh and Appa-Lay-shuh. If I hadn’t grown up on a farm, worked manual labor, or been raised in southern Ohio how could I have ever entered the field?
Appalachia, as both background and method, represents a host of quotidian, everyday affects that, as Kathleen Stewart notes, “slide into place at a moment’s notice.”10 Appalachia—a place where mango can mean bell pepper. Appalachia—a sensory experience brought into words: The y’alls. The orange camo coveralls. The photos of a father and son, bows in hand, crouching over a whitetail buck, tacked to the community bulletin board at Walmart. The independence. The interdependence. The grinding theatrics of a demolition derby. The smoke pouring from souped-up jalopies rollin’ coal at the country fair. The Confederate flags. The first time I saw a swastika tattoo. The young love of two pimple-faced teenagers wearing muck boots, his lanky arm over her slender shoulder, holding hands on the courthouse steps. The off-grid enthusiasts I’ve met on solar jobs with back issues of Guns and Ammo and a .45 revolver on their hip. The poverty. The rich cultural history. The moonshine and paw-paw festivals. The newly refurbished Eclipse company town. The other company towns.

The People and Their Places: Finding Participants

Figure 9: Go find Ronnie Smith. Author image.
There is an art to chitchat in small towns. Carsey’s is an old-school barber shop; the kind of place with a stenciled plate glass window and a candy stripe pole. The barbers are all men, all former military, and all have round, fat bellies that press against the back of your head while they work. The shop’s default haircut is a variation on the high and tight. Today, my barber is a former sailor with a crisp flattop. Swiveling me around in his chair, so our eyes meet in the mirror, he tells me he always carries a .380 pistol. We talk about the dissertation. He tells me a buddy of his, Ronnie Smith, out in Redtown, has built plenty of houses. I should talk to him, but he doesn’t know if Ronnie has a phone. He writes Ronnie’s name down on the back of a business card, slipping it in my palm as we shake hands and I head for the door.

I never found Ronnie, but this is life in southeast Ohio. As a result, I never really feel like my fieldwork is over. There is always the possibility that a conversation will crop up and I’ll be invited to someone else’s house. Referencing “the field” or “fieldwork” is thus less a reference to place or practice as it is a shorthand for conveying the sensuous experiences associated with talking, working, and thinking with home.

Nearly all my participants were referred to me through word-of-mouth (see Appendix A). Word of mouth is how things get done in small-town Ohio. But often I was given just a name, which meant that, in some cases, the individual didn’t own a phone, didn’t get cell service at their place, or was purposely trying to live under the radar. In bigger towns, word of mouth usually meant that the potential participant was afraid they were in violation of local building ordinances. In fact, after one interview, I was given contact information for another off-grid homeowner only to find that the family was
facing eviction for residing in a condemned structure. When I called the next day to set up an interview, the father, a man with a scratchy voice and a heavy drawl, told me didn’t feel comfortable bringing an outsider to his home. Experiences like these reminded me, that when it comes to people’s homes, I will always be an outsider.

Embodiment and Muddy Boots Ethnography

As I noted at the onset of this chapter, I believe that embodiment and fieldwork are inextricably linked—through bodily habit, humans perform culture, consume matter, and cyclically “reinvent their ways of being in the world.” For this reason, I also believe that, over time, rhythms and habits of the laboring body transcend what Judith Butler refers to as a “stylized repetition of acts” to become a primary way of organizing experience. In this way, as Butler notes, the body can never stand in the way of performance, for the body is performance. Or rather, the body is what makes performance possible.

No memory exists apart from the body. The body experiences home, translating the actions of daily life into feeling and habit. To be at home is to experience home. Home is experienced. This much is obvious yet it tells us little about the subjective character (i.e., qualia) of these experiences. What does it mean to taste, touch, or smell home? Although the impulse to wield poetic license regarding home-as-symbolism is particularly strong, not every meaning of home is symbolic, imbricated by narrative, or constituted through metaphor. Home is performed and enacted through daily lived experience in ways that often resist literary symbolism. Here, I am reminded of geographer Yi-Faun Tuan’s exploration of the etymological resemblance between the
French word for knowledge (savoir) and the English cognate “to savor.”\textsuperscript{13} Any substantive inquiry into the meaning of home must therefore consider the activities, habits, and rituals undergirding domestic space as lived experience.

Key to sense-based ethnography is the fact that fieldwork must consider how multiple modes of perception (i.e., taste, smell, etc.) categorize experience. For this reason, sensory ethnographers, notably Sarah Pink, advocate sensory fieldwork on a quotidian notion of home rooted in the analysis of “how people make place or experience inequalities in their everyday lives.”\textsuperscript{14} Hence, sensory ethnographers often pay attention to daily habits, such as walking, eating, and dwelling, that are inherently multimodal affairs, and as Pink argues, “a sensory aesthetic of home can provide an informative starting point for the analysis of everyday domestic life.”\textsuperscript{15} Continuing, Pink notes,

A sensory aesthetic of home involves particular attention to the textures, sounds, and visual dimensions of home, how participants create atmosphere in their homes—as such, how they make their homes feel ‘right’ and what they do about it when someone or something messes this up.\textsuperscript{16}

To answer this sensory question of “feel” many sensory ethnographers prefigure home as a space of material circulation wherein, as anthropologist Harold Wilhite writes, “people do not consume energy \textit{per se}, but rather the things energy makes possible such as light, clean clothes, travel, refrigeration, and so on.”\textsuperscript{17} In this way, sensory fieldwork provides a unique approach to scholarship on home that considers how bodies learn to remember place as we consume matter in the service of dwelling.
Following Merleau-Ponty’s *Phenomenology of Perception*, I view bodily sensation as the most basic and fundamental unit of experience. Hence, embodied experience is qualitatively different from all other objects in space, and as Merleau-Ponty writes, “if my arm is resting on the table I should never think of saying that is *beside* the ashtray in the way in which the ashtray is beside the telephone.”¹⁸ The whole body, upon this account is thus not reducible to an “assemblage of organs juxtaposed in space” but rather takes its significance through a body image that informs perception, action, and habit. This body is thus “no longer seen as the straightforward result of associations established during experience, but a total awareness of my posture in the inter-sensory world.”¹⁹ I value this theoretical imperative to understand home and habit as affect-laden performances that creates meaning as the body enters, consumes, and is, itself, consumed within domestic material ecologies.

Sensory ethnography pays credence to the body in terms of theory, method, and writing. Theoretically, sensory-based approaches to cognition consider how perceptual modalities such as olfaction, taste, and vision, touch, and proprioception (i.e., the ability to intuit the spatial location of body parts) inform a sense of self. This notion of *body image* operates as a heuristic to determine possible motoric action as well as the very nature of perceptual experience. Although scholarship on body image contests the number of bodily representations available at any given time, most theorists of embodied perception agree that the body image, simply put, is what allows individuals to gather knowledge about the world around them and partake in bodily action.²⁰ Hence, a sensory ethnography requires a theoretical commitment to view ethnography as an embodied
practice of action, and as editors Paul Atkinson, Sara Delamont, and William Housley conclude in *Contours of Culture*:

What is undeniable, however, is that the physical presence of the ethnographer implies not merely a passive physical presence, but an active Being-in-the-World. It implies the sort of sensory action implied by phenomenological accounts of perception and interpretation.21

Likewise, Chris Tilley argues that the embodied nature of ethnographic research is especially true for activities that “require doing rather than saying.”22 Regardless of their background or expertise then, sensory ethnographers regard the body as a conduit to knowing a field.

In “doing” my fieldwork then, I began to view research as an embodied practice as my method of writing and thinking about home shifted towards the rhythms of my own body. For example, as I became more involved with my field, I realized that my thoughts on fieldwork did not stop when I left the field. My most profound thinking happened when I had a chance to engage in personal domestic habits. As a result, I began carrying a notebook tucked in my waistband as a material reminder that ethnographic methods do not end the moment one leaves the field. Although I also took fieldnotes in the form of audio recordings—the way the notebook sometimes chafed against my side while I walked, or the fact that I had to remove it before sitting—prompted me to establish notetaking as a daily activity.

Although writing in the field can be invaluable, the process of ethnographic data collection begins with headnotes. Headnotes catalogue the day-to-day musings that
follow us in-and-out of the field as we conduct research. Headnotes proceed fieldwork. They begin when we begin envisioning the field and are rooted in the individual consciousness of each researcher. In this way, as Michael Taussig notes, headnotes continue to evolve as the body becomes more comfortable in the rhythms of fieldwork.\textsuperscript{23} Headnotes are, therefore, an extension of habit and as, Roger Sanjek writes in “A Vocabulary for Fieldnotes,” “Headnotes are more important. Only after the anthropologist is dead are the fieldnotes primary.”\textsuperscript{24} By thinking through the actions and body in fieldwork, headnotes provide ethnographers the chance to consider the fieldwork as a space of daily habit and embodied action.

I do my best thinking when I’m moving. This is perhaps why I’m attracted to research practices that place a premium on embodiment. As a matter of practicality though, I also felt it necessary to work with my participants as a way of extending our conversations about home to the domain of practice. Labor, in the most basic sense, catalogues rhythm, but these rhythms are often not apparent until experienced. I first realized this working 10-hour days, six days a week, at a tool-and-die shop one summer. The pay was good, cash under the table, but every action was the same: Take a six-foot piece of metal rod, insert it into the chamfer machine. Mind the blade. Turn counterclockwise six times. Run your thumb over the edge to check for burs. Place on plastic cart. Repeat.

When I returned to college, Marx began to make more sense and I didn’t need to read about the bodily discipline of Taylorism and Fordism to understand it. Humans,
more than any other species, craft their identity and surroundings. As the body labors to action, a sense of self emerges. Home does not exist outside of the body and habit.

Figure 10: Mixing cob by the bucketful. Author image.

If I wanted to study how people perform identity through domestic activity and homebuilding my fieldwork had to be “work.” I couldn’t just observe. I didn’t want to write about cob; I wanted to learn how to mix it (see Figure 10). Likewise, I didn’t want my participants to describe what their home meant to them; I wanted to see the care they demonstrated while we worked together. I first came across the idea of “muddy boots ethnography,” while reading about Pamela Richardson-Ngwenya’s work on sugar cane farming in Barbados. Drawing from a theoretical framework of affect theory and new materialism, Ngwenya asks, how ethnographic research can amplify sensory, bodily, and affective registers to help “conjure and enact a vitalist materialism in the field?” To answer her research question, Ngwenya turns to research methods that allow her to work
alongside others in what she terms “muddy boots” ethnography. Ngweyna’s focus throughout her time in Barbados was to understand how subjects and objects are “composed of nothing more or less than relations, reciprocal enfoldings gathered together in temporary and contingent unities.”

In terms of method, Ngweyna combines diary writing with audio-visual recordings to examine how action and objects on sugar cane plantations shape larger socio-political relations. It is not always clear, however, how Ngwenya’s writing and diary were shaped by the type of action she undertook in the field. In fact, her writing from the field often reads like a perfunctory retrospective of a day’s work:

Fuel cane selection was the task of the day. [The agronomist] devised a scheme of tagging of selected canes so that the . . . crew can go through the field and take cuttings from the same crops to test for brix level. They can then follow the codes to . . . Stage 2 samples, if they find a variety that might make a good parent. We selected about 120 varieties . . . .This was difficult work. [The agronomist] said it is the most difficult task she has ever had to do in her career. The hardest day yet, and her most miserable! These canes grow very tall, thin and profusely, up to 30 per hole with lots of trash [leaves] too . . . .

Fieldnotes such as these act as a kind of aides memoire, as anthropologist Roger Sanjek calls them, calling to mind the people, places, and objects that must be committed to paper before they are forgotten. I think of this type of field notetaking as akin to the practice of ekphrasis—the vivid description of a scene through narration. Here the goal
is to observe and “do” the day-to-day life of fieldwork so that details and actions are not lost or forgotten.

Aside from the acknowledgment that “this is difficult work,” Ngweyna’s fieldnotes tell very little about how bodily experience shaped her fieldwork. Although I appreciate Ngwenya’s call to the labor of fieldwork, I believe that muddy boots ethnography necessitates a finer-grained look at how the body shapes perception, and as a result, data collection. Phenomenological approaches to ethnography must therefore account for how researcher and participants evoke sensory categories and perceptions in the field. When combined with an intention to intuit the subjective sensory content of qualitative research through head, scratch, and fieldnotes, critical ethnographers attend to the complex flows, fragile bonds, and fluid dynamics of symbolic meaning.30

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Before I began my fieldwork, I thought it would be best to take photographs of each build-site or home to represent my experiences (see Appendix A). Based on my readings that prepared me for this project, audio-visual data collection methods were best suited to study the sensory qualities of home. For example, with regard to the domestic realm, Daniel Miller argues that fieldwork in modern western homes necessitates the use of multimodal interview methods to allow informants to reconstruct everyday practice in a phenomenological reflection of what they think they “actually do” within the confines of the private, intimate realm.31 Another contemporary example of photographic documentation is provided by Sarah Pink’s 2002 study of domestic practices in which subjects described homemaking in terms of the habits and practice of doing laundry.32
For these reasons, I set out to take as many photographs as possible as a complement to field-based writings and interviews.

But sometimes the best laid plans grind up against the logistical constraints of fieldwork. In the field, I found that my practice of recording data changed drastically as I worked alongside my participants. The idea of taking long-form notes, many photographs, or audio recording sometimes proved impossible: Enacting muddy boots ethnography means, coincidently enough, that your hands are often muddy. Dirty hands take bad photographs and muddy fingers only smear the page. I also found that the very process of note-taking created an unnecessary barrier between my participants and myself. The action of bringing a camera in to focus on a scene, not only interrupted the activity of work, but also eroded the rapport between myself and my participants. The notebook, audio recorder, consent forms, and camera are all methods of documentation, and I learned that they often make people nervous. As a result, I realized that my photographs sometimes catalogued my own habits in the field rather than the design of my participants houses. The images selected throughout this project are reflective of this tension.

In my fieldnotes, I wanted to remember the objects, actions, and routines of my participants homemaking to understand how the geometries and function of domestic space enshrine habit, cultivate memory, and shape the meaning of home. Here, I learned that, affects, by their nature, are fleeting and transitory. They are derived from the way things interact with their environment, and are, as affect theorist Brian Maussumi notes, like a Doppler effect in that they are subject relative and always moving. My method of
documenting the field therefore evolved to accommodate the landscape and affective
atmosphere of each home. These atmospheres help create a sense of home through daily
habit, action, and consumption within a material ecology. Likewise, I think of the way
that my data collection changed as analogous to the way the body leans to adapt to its
surroundings—for every change, something takes its place, in a process that I discuss
throughout this project as an affective conservation of matter.

Figure 11: A sketch done on scrap plywood to understand integrated passive solar
features. Author image.

Sketches, poetry, and audio recordings of the field and fieldwork, were all
unintended work arounds of the embodied nature and material constraints of the field (see
Figure 11). Most of what I wrote or drew in the field, I consider to be scratch notes. If
thinking about fieldwork through headnotes represents a phenomenology of the field,
then scratch notes—i.e., the hastily jotted first impressions of a field—offer a kind of roadmap of ethnographic habit and action.

Because of my decision to build alongside my participants, much of my writing in the field was restricted entirely to scratch notes. Typically, I would wait for a break in the action or excuse myself to write 1-2 word summaries. In these notes, I relied on the power of a single word or phrase to capture a state of mind or conjure up an affective landscape. For example, the following scratch notes were taken during my visit to Stanley’s cob house project in July:

- Sharpening scythe blade. Needs to weld or solder it. “You have to be careful. You can swing these too hard.”
- Asked “why cob”—most efficient, low-impact material.
- Outline of the cob house is heart shaped.
- A big camera is not practical for working.
- When does home stop being a home and become a place for natural decay?
- Lady woods//union deserter//court martial//hanging
- Bicycle spokes// 550 cords//nylon

When working, I didn’t have the time to note my interactions word-for-word, so I would keep a running mental commentary until I found the time to record them on my phone. Although, in retrospect, many of my scratch notes read like word-salad, they were my attempt to keep the vitality of the field alive. As I became more habituated to my research practices, I began to develop my own shorthand for recognizing the body as a research instrument.
In the first volume of the unfortunately named *My Struggle*, author Karl Ove Knausgaard writes about an interview he conducted as an aspiring journalist with the Norwegian author Kjartan Fløgstad. Along with his brother Ygneve, Karl decided to run the interview without tape or notes, a journalistic gambit designed to impress Fløgstad. In retrospect, Karl writes,

> We were excited and happy because, it had gone so well hadn’t it? We had been talking to Fløgstad! We were so excited that neither one of us was in the mood to sit down and write a report about what had been said, we could do that the following day, now it was Sunday, the weekly soccer pools match would soon be on TV, we could watch it in a bar, and then go out, we weren’t in Oslo that often after all . . . the train went the next day, so there wasn’t any time to write anything down then, and when we arrived in Bergen we went to our own places. And if we had already waited three days, we could wait three more couldn’t we? And three more, and three more? When, at last, we did sit down to write, we could not remember much.35

As memory fades so does the potential for evocative writing. I read the first two volumes of *My Struggle* during fieldwork, taking inspiration from Kgausgaard’s ability to vividly unearth past memory. But I also view Kgausgaard’s account as a cautionary tale regarding the fidelity of memory over time. Memories decay and, in decay, we lose our rhythmic attunement to field. Thus, following Malinowski’s advice to “produce a chaotic account in which everything is written down as it is observed or told,” when I returned from an interview or build, I compiled my scratch notes in a series of long-form stream of
consciousness fieldnotes on the people, places, and activities that I encountered. The following is an excerpt from reflections on my second day at Stanley’s farm:

Cob project has been on mothballs since 2001, and it’s on the brink of breakdown. Waiting. Snakeskins wedged in crevices. Black rat snake and copperhead skin. Spiders and wasps are the primary occupants now. If you’re going to build your own home you have to learn to work with wasps. Killing them is a losing battle. Save for yellow jackets you can learn to work alongside almost any type.

The cob house is in mothballs. A body dying—a house dying. Houses don’t decay the same way. When you die your heart, stops pumping blood and that’s it. Its startlingly abrupt even if it’s taken months or years to reach the point of failure. The house on the other hand has no such discrete timeline, just various states of disrepair awaiting an inevitable collapse. Gnats, poison ivy, oak, and sumac these are the primary tenants now.

Describe Stanley’s cob house: bicycle inner tubes, yellow nylon rope, and 550 paracord hold down the tarps. Find more sailing terminology about knots. What type of knots? Bowlines, clove hitches, sheet bends. Describe how the knots hold down the billowing tarps—all balled up at the ends and knotted. I don’t know why this fascinates me. Against the background of the lake it almost seems as if the house is about to set sail. Like it’s at a dock struggling against its earthen moorings. With the billowing tarps and undulating cob curves it looks graceful and alive. A ship’s hull with pockmarks and barnacles clinging to the side. Alight.
But the house is not at sea. It’s not undulating. We take off the tarps, it’s like a snake sloughing off skin. Stanley talks about his time in the Navy. The house sheds its nylon plastic carapace a new life. Like a cicada breaking. This is the best image. With its pockmarked brown surface the house resembles the hard, nut-brown carapace of a cicada.

The house is located about 800 meters away from the main house. That’s half a mile of mowing to reach it. Both Stanley and I are bloodied from thorns and knee-high thistles. Sacrifice for the cob gods I suppose.

One of the tarps is an old Ralph Lauren billboard—take note of this. Inside the effect is eerie and unnerving. Light hits the roofline illuminating a blond sailor and failed congressional candidates above you.

On the way, back for lunch we cross lady woods. Stanley sees me eyeing an old cemetery. He tells me that John Lady, a rebel deserted was captured, court marshaled, executed, and buried right there. This reminds me of the short story about a confederate hanging—An Occurrence at Owl Creek Bridge? The author, Ambrose Bierce, grew up in Meigs county, I wonder who influenced whom?

Extended fieldnotes, such as these, allowed me to record the day to day activities of fieldwork with an eye towards sensory perception and thick description. As a rule, I wrote fieldnotes before transcribing each interview and tried to finish each entry within 48 hours of leaving a build. The length and tone of these fieldnotes varied, but, generally, I tried to fill one notebook a month. I found that the more that I pushed myself to write, the more I remembered from fieldwork.
Fieldwork starts and ends with the body. As in, it involves the body’s “being there.” We are fascinated by bodies, what they do, how they move, and what they mean. Bodies matter, so I pay attention to how they interact with others in a material ecology. Here, dwelling maps habit derived from consumption as “little bits of history move around at tremendous speed, settling with a not-always-clear logic, and rarely settling for long.”37 Habit, as a method, is that which makes things known and strange, and to borrow author Teju Cole’s aphorism, “we are our habits in sum.”38 In a material ecology these habits engender ecological awakenings as we attune to our surroundings in new ways. But other times, as in the case of logging or excavation, habits of dwelling unearth forgotten histories. The next chapter considers both as an extension of homebuilding in the Ohio River Valley.
Figure 12: A war poster by the US Fuel Administration. During both World Wars the coal and logging industries were viewed crucial to the war effort. Image courtesy of the Library of Congress.

Elbows and Assholes

Melvin watched as the sizing saw made quick work of the last log. The smell of motor oil mingled with wood smoke as he brought the coffee cup to his mouth, watching steam rise to meet his breath. Stamping snow from his boots to keep warm, he thought of the drive ahead. Certain things Melvin held above others as a matter of pride: The special driver’s license he’d been issued at fourteen to keep the family business afloat while his brothers were in France, the oil-black chicory coffee he drank every morning (the good stuff was reserved for the boys in the fight), and the dirt underneath his fingernails. He’d watch some of the older men on break dig under their nails with pocket knives, but, to
Melvin, it never made sense to pick away the mark of worker. Again, he smelled wood burn against the blade, like a fire without warmth.

The family sawmill was big. Inside, a fine blanket of sawdust covered the floor. Opposite Melvin were two electric motors built like stout draft horses for torque not speed. Together they powered the sizing saw with its two circular blades separated by a thin gap to mill through the largest logs in a single pass. This gap, known as a “kerf,” was maybe a ¼ inch wide, but Melvin imagined himself over the saw, carefully running a fingertip between each spinning blade. The thought enough turned his stomach. He knew better. You had to be careful around saws—he’d seen enough to know that. As the old-timers used to say, “Kickback will kill a man.”

When the milling was complete, Melvin loaded lumber into the back of the family truck, his eyes passing over the grain of each board—each ring a year, each tree a century. With the war, there were no men left to drive so the work fell to a boy. Every week he’d load and haul wood from the family sawmill to Pittsburgh. The mines and steel mills needed lumber, and Melvin thought of war posters he’d seen downtown, “They’ve got the guts. Back ‘em with more metal.” It took him a full day to drive the 100 miles to Pittsburgh, and Melvin was lucky if he could coax the rust-bucket past 30 miles an hour on the backroads snaking along the Ohio river. Although he was tall for his age, he had to stand up slightly to shift gears, and after a day’s drive his left leg ached from pumping the clutch. Sometimes to pass the time, he would imagine himself curled up in a foxhole in the south of France racking the bolt of a well-oiled Springfield rifle, or driving
along the beaches of Normandy feeling the pull of the steering wheel as his truck slogged through wet sand.

By the time he reached Pittsburgh the sun would have just begun to slip behind the hills, turning the Allegheny the color of burnt amber. He would stay the night on the bench seat, waiting to swap out the lumber for a load of coal in the morning.

On his way back, Melvin delivered coal to prearranged stops, emptying the truck bed shovelful by shovelful into coal chutes along the Ohio-Pennsylvania border. People didn’t treat him like a kid anymore. With a special driver’s license, dirt under his nails, and a fine layer of coal dust atop unruly shocks of blonde hair, most barkeeps would fix him a drink if he asked. Maybe he passed for 21, but maybe they thought he needed it more than he didn’t. So, Melvin thought, with an adolescent’s bravado, that he was probably the only 14-year-old in Ohio who could bend an elbow with the best of ‘em.

Figure 13: Melvin and his grandchildren leveling sand. Author image.
“Elbows and assholes—I wanna see you working”—that’s what Melvin’s pop always told him. When his mom passed though, Melvin’s dad shacked up with a new wife on the other side of the family’s 200-acre property, leaving the oldest daughter to tend to the kids. Melvin was 12 or 13 at the time and the youngest, Alvin, couldn’t have been more than a year old. Years later, Melvin figured that’s why he treated his grandkids the way he did. When they wanted a sandbox, he’d had a truck dump a massive pile of sand in the back yard. He gave each boy a rake and told them to level that friggin’ sand out. When the boys began belly aching, he made them keep timesheets. On payday, he called ‘em into the living room one by one where he haggled down the price of their labor. “You’re pullin’ my leg? You’re think you’re worth that?” he asked them half-joking. “No ten-year old makes prevailing wage.”
There was always work to be done. The wood racks needed filled. Trenches needed to be dug. But these days Melvin could hardly wrap his swollen knuckles ‘round a pick axe, much less swing the damn thing. So, nostalgia replaced labor and some nights Melvin would dream about that old sizing saw. In the dream, he was just a speck of saw dust, dancing back and forth between two buzzing blades.

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It was John, Melvin’s grandson, who told me this story over an old sizing saw during my first visit to Haga Ridge. Stories like this one represent the tangled history of place, labor, and identity characterizing Appalachian environmentalism. John’s memories of home pay testament to a history of exploitation in the Ohio River Valley and the design of his house allows his family to counter this history through daily habit. In this chapter, I show you how participants such as John build their homes and why this matters.

When I began this project, I set out to tell a story about why some people decide to build homes with long-forgotten techniques. At first, where these homeowners lived seemed like an afterthought; at the time, all I worried about was finding the next participant. But by working with and interviewing my participants, I saw their stories as an extension of a domestic material ecology of affects, habits, and vibrant matter. For them, building a home is a political act taken to curb ongoing ecological destruction in the Ohio River Valley. This is not the same environmentalism that, in recent years, has made cities like Boulder, Austin, or Berkeley famous. Appalachia carries it different. It’s a pain found not in hypothetical “what ifs” (i.e., “what if sea levels rise,” “what if we
reach the carbon tipping point”), but in the lived reality of tap water that can be lit with a match and of verdant mountaintops reduced to moonscapes by machines taller than any building in West Virginia.¹

It is now sixty years since Lyndon B. Johnson traveled to southeast Ohio to declare his war on poverty. But since 1908, the number of mining jobs has dwindled from 50,267 to 2,279 in the Ohio River Valley, and every week in West Virginia the same mixture of ammonium nitrate and diesel fuel used by Timothy McVeigh in Oklahoma City topples mountain tops with a combined explosive force equivalent to the “Fat Man” plutonium bomb dropped on Hiroshima.² It’s a history that not many know, even though American domestic practice and architecture remain intimately tied to the vast extraction of resources from the Ohio River Valley. Faced with this history, my participants build homes to tell these stories.

What has happened to the Ohio River Valley resurrects a pain that’s carried like an old sore that, years later, still festers. What’s going on Appalachia is not normal, and as the Kentucky poet Wendell Berry writes, “If you are at all a normal human, you will find it hard to swallow. You may find it, in fact, a putrid lump that will gag you somewhat before you can get it down.”³ So this is a story about what to do when things happen that you just can’t stomach. And so, it’s also a story about the long history of gut-shots that have shaped identity, labor, and land in the Ohio River Valley.

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I don’t remember when I first met John, but I remember the first time I visited his house. We spent the day installing solar panels at a cabin on the West Virginia border—
the kind of place with “shoot first, ask question later,” and “protected by .45 cal.” stickers plastered on the windows. For the last ten years, John has installed solar systems in southeast Ohio because, as he told me once, “the decisions we each make daily add up to a lot more than us ranting and raving about politics. I just all adds up to the little things we have to do.” John figures that his job, and the home he built in 1998, are key to fighting exploitation in the Ohio River Valley.

I cut my hand pulling wire that day, and we stopped at John’s house so I could clean up. I spent the afternoon with John talking politics, sustainability, hunting—really, whatever came up. Before I left, John showed me an old saw from his grandpaw Melvin’s sawmill, telling me how his grandpaw made the drive to Pittsburgh every week as a young boy. The saw was rust streaked and scaling by then. I remember thinking that it looked lonely there, tucked away in a small clearing, exposed to the elements and no longer in use.

John’s story about Melvin and the sizing saw stuck with me, and I asked to interview John in April of 2016. I remember that it was raining on the drive up to John’s—fat, splotchy rain drops that kept me fiddling with the wipers and windows to keep the cab from fogging up. I ran over a black rat snake just before the asphalt gave way to gravel. It was still cold; the early spring sun hadn’t yet beat back the winter fog that winds through the hills and hollers, uncoiling in gauzy dew blankets over the occasional corn or hay field.
John lives in the backwoods. To find him, I follow hand-painted signs for a mission church. Turning out of the lowland, I downshift as my truck sputters up the ravine. The dirt road is swamped and water slashes down the hillside in small, roiling eddies. Crossing the church, I turn left, just past the cemetery. John hears my truck, because when I arrive he’s already in the driveway. It’s the first time I’ve looked at the house with an intent to remember it. Against broad-leafed walnut and Burr Oak trees, the ruddy plaster walls of the house curve outward, like a hunter’s bow mid-draw. There are almost no hard angles to the home, save for the green metal roofline. The whole structure has an undulating feel, as if it relies on some mystical force to brace itself from the impending forest.

I follow John inside. The front door opens to a small mudroom where coats and hats hang on wooden pegs next to a black iron woodstove. A child’s recurve bow leans against the wooden staircase leading to the second floor. The largest room in the home serves as a combination kitchen/living room. A thick manila rope hangs from the ceiling, and since John and his sons are avid climbers, I figure they use it for training. The smooth plaster walls are cool to the touch. Small clay niches containing feathers, watercolors, and other trinkets have been hand sculpted into the wall. As we sit together at a worn black walnut table John built nearly twenty years ago, I set up my tape recorder and John tells me about building his home.
Dreams, Concrete, Powder Posts, Bore Bees

The anthropologist Ruth Behar defines liminal space as “those in-between places where what has been is no more and what will be is not yet.”4 Scholars of performance and ritual, most notably Victor Turner, trace the concept of liminality to the folklorist Arnold van Gennep’s study of public rituals. Under this narrow interpretation, liminal performances include rites of passage such as Bat and Bar mitzvahs, funerals, and weddings designed as “vehicles of transition from one sociocultural state and status to another.”5 Accordingly, the concept of liminality represents a threshold of transition and potential.

The idea of liminality retains an intimate connection to place. Yellow boot marks at Paris Island, a college’s entrance gates, or the Statue of Liberty at Ellis Island all represent thresholds of departure between the known and unknown. To be in a liminal space is to be adrift of a common mooring in place. We enter liminal zones when we leave familiar places, languages, or homes behind. Liminalities can punch, pull, or kick. Liminalities may be violent, refusing to let go. Liminalities are there in a refugee’s hastily packed suitcase, but also, as Italian philosopher Georgio Agamben argues, in the very architecture of the concentration camp and the words, “Abreit Macht Frei,” which mark the homo sacer (trans. “cursed being”) as a body no longer human.6

Today, writing on the liminalities of place and space often prefigures dwelling as a decidedly transnational act. In the age of the “global nomad,” the vast circulation of bodies, materials, and affects make for what cultural anthropologist Arjun Appadurai terms a “de-territorialized” sense of being.7 In contrast, the people I’ve met during my
fieldwork tell stories not of leaving a land, but of a land leaving them. It is a sensibility of home rooted not in travel, but in a change of place over time. Here, the physical construction of a house tells stories gleaned by studying the materials, bodies, and habits that comprise Appalachian dwelling and history. Home building, in this sense, fills in the semiotic gap between domestic architecture and personal memory, allowing my participants to tell stories through the design of their homes. The home becomes a dream space. A dream space even if these dreams sour.

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After John’s twenty-first birthday, the dreams began. At the time, he was working for the family business and had recently moved in with his girlfriend Jodie. Together, they lived without electricity or water in a cabin he built on his grandfather’s property. Life wasn’t bad (the job paid well) but something was missing. They spent their nights together in that old cabin dreaming about the home they would build. As John remembers,

We were talking about the home we wanted to build for ourselves and my picture of that home was off the grid with a minimal need for any of those conveniences. Just the basics—water and minimal electricity. I wanted to use alternative materials [and] use almost exclusively recycled materials for the ecological balance. I mean I tortured myself on my house doing that in places that I could have avoided and been just fine.

John pictured a home nestled deep in an old growth forest, tucked away in some forgotten holler, telling me once that “there would be no driveway, just a gravel path barely wide
enough for a hand wagon to walk in food and other supplies.” The family would live on a dead-end road and build with whatever they could scavenge. Pay now or pay later. He would have the entire home paid off before his first kid.

So much of life is spent in a hurry. Building a house offered John a way to slow things down. To stop and take in the measure of it all. To extend himself, his thoughts, his environmental beliefs, and his protection over a soon-to-be family. The house would become, in the words of theorist Donna Haraway, a “companion species” joining human and non-human materials in the service of dwelling to tell regional histories. So, when John had scrapped together a little money, he bought acreage that was too steep to lumber and too rocky to farm. The land was dirt cheap, and John paid pennies on the dollar for 99 acres just outside of Wayne National Forest along Big Run creek.

For John, how a home is built matters. The materials and design of a home facilitate daily action to either encourage or hinder sustainable domestic rhythms. As John tells me during our interview,

I think people should be conscious of those decisions that they are making. I think people should take existing homes and make them efficient. They should consider the materials going into them. It seems like a shame not to. I don’t think people when they site their house, think about which direction they are pointing it [for passive solar]. People don’t think about it. They are still thinking about pointing it towards the road so that the neighbors can see it when they drive by.

So, the story of John’s home is also a story about how the materials and design of his house stand in for larger political and environmental beliefs. Or, as he puts it:
I went from living with all the modern conveniences to that cabin with Jodie with no electricity and no running water. Using candles because of my commitment to [this] land and living off-grid. It wasn’t like I wasn’t thinking about how this was a stance I was making. But I don’t think that it’s hard to live without so much of what we think we need.

Once John decided on a strawbale home, the first task was to set the foundation. John didn’t have the money or time to pour a concrete slab or excavate a basement, so he decided to build a rubble trench foundation. This meant hand digging a three-foot deep hole outlining where the home would be. Once the excavating was done, John stuck a drainage pipe on one side and filled the whole thing with gravel. Because of the slope of the land, the home would sit on top of what was essentially a French Drain. Rather than fight the elements, any water that found its way under the home would simply follow the path of least resistance out. It wasn’t a radical invention, not really an invention at all, but a way to work with (instead of against) nature. A vernacular throwback to the old-timers, who built before the era of sump pumps, cordless drills, and nail guns.

Everything John’s learned, he’s poured into this house. Every ass-busting nick, cut, and scratch. But when I first asked John why he wanted to build a home himself, he mentioned the years he spent with his buddies living in a van, dropping LSD and, in his words, “trying to escape Ohio.” Nearly two decades later, John views the years he spent on the road as a transformational experience in his return to southeast Ohio and manual work. “The idea of working hard seemed crazy to me,” John tells me,
until I was detached from it for a while and then I looked back on it and thought, “you know how much I respect someone who works with their hands.” I was a bum for long enough until I saw that in the end, I need to be working to get what I want and to feel like I am participating here and earnin’ my keep.

Living on the road taught John that his dwelling needed to be rooted in the labor and land he grew up with. When he got home, John started reading more about sustainability and natural building—books, articles, whatever he could get his hands on.

In place of a traditional concrete foundation, John poured two parallel concrete grade beams spanning the length of the house. Each beam wasn’t huge—maybe 20”x18” with rebar laid every five feet for reinforcement. On top of each beam, John placed two pressure treated two-by-fours as a moisture barrier between the concrete and first row of straw bales. The pressure-treated lumber wouldn’t rot, but John hated the idea of using it, once telling me that “pressure-treated splinters give the nastiest infections. And besides, you can practically taste the arsenic when you saw into ‘em.” John wanted the house to be an extension of his environmental beliefs, and he had practically tortured himself scavenging for scrap lumber. But, in a modern world, there need to be concessions. As one of his buddies pointed out, you don’t throw the baby out with the bathwater—say you save a couple bucks by scrounging up some old posts, but then again say that some of those posts are already rotten and some of those two-bys have carpenter bees. “Just like the environment, there’s ‘gotta be a balance,” his buddy told him. After this conversation, John went with the pressure-treated lumber, a small concession on a larger investment.
Pouring each grade beam wasn’t easy: concrete kills work boots so John spent nearly two weeks in rubber waders that chafed at the back of his knees as he washed and reiwashed tools before bits of concrete dried on them. To make matters worse, the only spring was near the bottom of a small ravine some 200 yards away, and you could only carry water out by the bucketful. “I probably could have poured half the concrete I did and gotten away with it,” John tells me years later during our interview. But the extra concrete was worth the overkill. This was his home, for a new family.

Once the foundation was set, the work went much faster. At the corner of each grade beam, John set stout four-by-six inch posts to support the weight of the roof. After the roof was on, it was time to stack the walls with straw bales. The bales themselves were 18 inches wide and this thickness afforded a perfect biodegradable source of natural insulation. If the bales needed to be trimmed, John would use a chainsaw to make each cut before re-sewing the bale with a long, thin hooked needle.
By autumn of their first year on Haga Ridge, John and his wife Jodie moved into a junker school bus on the edge of the property. The bus, an old deadhead relic from the ‘60s, was courtesy of another carpenter, and although it had been set up for short term living, it lacked running water or heat. The inconveniences pushed John to work harder. Most nights after work he stacked bales by himself until around midnight. On the weekends, his parents sometimes visited, and occasionally a buddy or two would stop by to help. Together they’d get a little high, turn up the radio, and work against the noise and fumes of the generator. John remembers those nights fondly, listening to the driving beats of *AfroPop Worldwide with Georges Collinet* while they stacked straw bales in the dark:
I can remember being out here stacking bails and it started at like 11 [pm] and we were still making coffee, hooting and hollering. Carrying on [and yelling]—“whooo hooo!!!” Totally middle of the night, running a generator to power lights to stack bails all through the night. My wife was pregnant with my first baby during those months. We owned our own piece of land. We were excited.

When winter came, building ground to a halt. With the first frost, everything became a little harder; you had to keep taking breaks to let your fingers defrost. And besides, John and Jodie spent most of their free time in the bus cuddling under a mess of blankets for warmth. If it got to be too much, Jodie, with her newly acquired baby bump, would spend the day at the closest library to keep warm. She’d move through the stacks with no real purpose, letting the smell of wood smoke mingle with fading corona ink and yellowed paper as she ran thin, delicate fingers across the rigid spines of each volume. Every once and awhile, she’d pull a book out a random—Voltaire, Dickens, Hillerman—(it really didn’t matter) and read the first couple pages. If the opening line caught her attention, she’d curl up in a beanbag chair and start reading. When her attention waned, she might open her notebook and sketch the home-to-be. John and Jodie always wanted a big outdoor kitchen with a wood burning cook stove, but, as they’d already learned, when you translate dream into reality some things inevitably slip through the cracks. “Jodie was a trouper,” John tells me during our interview, “I mean full-on pregnant livin’ in there with no toilet, no water, no nothing. It didn’t seem like the biggest issue in our lives either.”
The bus was just a shell; a cocoon of what was to come. They owned a piece of land; it was all new. They were excited. They were optimistic.

Time also has a way of changing things though. For so many years the home had been a dream space for John and Jodie—a project still in the making, still ripe for imagination. It kept John up at night, weighing the pros and cons, fussing over this or that. But today, the house was fine. Just last winter he tore into the bathroom wall and found the straw as dry as the day it was cut. He built an addition with climbing gear, a ping pong table, and free weights. He’d excavated a pond and thrown up a small cabin for his in-laws. Hell, he’d even bought chickens for when the cicadas hatched later in the spring. Yes, the house was fine, but the memories of home had soured. John never thought that, after all this, the problem would be his relationship with Jodie. But now, he recognized the bittersweet irony of conflating identity with a hand-built home. There were no plumbed toilets. There were no building codes. There was no selling. Even after the divorce, how could either spouse leave this place?

Liminal Spaces and Domestic Architecture

John’s story is a reminder that building home is, without question, so much more than design or fabrication. But John’s story also hints at the liminal in-between-ness of home as both dream space and physical, architectural artifact. As we build a sense of home through construction and daily habit, a house becomes imbued with meaning. Drawing from Victor Turner’s assertion that liminal time is bound by no clock, I think of the relationship between house and home as a quantum indeterminacy of affect—like Schrödinger’s cat or Feynman’s double-slit experiment there are no certainties, only
Design may predispose habit, but where does a house end and a home begin?

When I began interviewing homebuilders, my biggest fear was that our conversations focused too heavily on the mundane details of building. Like John, many of my participants recounted in elaborate detail how they excavated their home’s foundation, secured local building materials, and decided on an overall design. In the field, they spent hours teaching me the proper mixture of sand, straw, and clay for earth plaster, or how to incorporate passive solar features into a design. I was learning how to build a house, but not what made their house a home.

Stories of dwelling are often concealed—caught in the liminal space between house and home. We navigate a house to share stories of home. So, as a researcher, I believe that it’s important to dwell in these liminalities to recognize why stories of home often chafe against temporal restraints. I first realized this working with a newlywed couple, Rob and Laura, on their home built from recycled tires. During one of our interviews, I asked Rob about how he became interested in homebuilding:

Rob: My dad was always changing and fixing up on the house. He taught me pretty much everything that I know about construction.

Sean: So, you grew up with and worked on some pretty old homes?

Rob: Yeah, and everything is just different. When I was flipping houses and remolding homes, they were all homes pre-1940. So, I learned a lot about what it took to build them. So, working on a house built in 1893 that you’re in a huge room and somebody ran through that entire home and put all the lathe up. How
insane. I tore a kitchen down to the studs, and it’s all rough cut, true dimensional 2x4 fours. And the hardness of that wood is incredible, it’s not pine. Trying to drive a nail into it was impossible. At the time, I swore that we wouldn’t live in a post-1940 house.

Rob’s first memories of home are those of working with his father, interacting with the work and materials of a past generation of builders. For Rob, the house exists as a temporal threshold joining human and material forces across centuries. In this sense, to be at home is, as another one of my participants, Sasha, noted, “very much related to the interaction between all things that live and the necessity for reciprocity and giving back to the natural world.”

On the drive home from Rob and Laura’s, I stop at small-town burger joint on Route 50. As I wait for my food, I listen to my conversation with Rob. On the back of a brown paper napkin I jot down the following: Why 1940? Why Pine? Why tell this story?

Logging, Material Ecologies, and a Poplar Beam

Fieldwork is performance. It attunes me to the habits and rhythms of a place. Like walking, we develop these attunements at differing cadences. Some ways of traversing a field come easier for some folk. Being a white male from southern Ohio, growing up on a farm, and knowing my way around a job site are all performances that are well-worn and allow me to cross a liminal space with my participants. For the ones that don’t come naturally though, you must remember to write them down to learn their hidden histories.
Ethnographic research recognizes that the people, places, and artifacts we encounter demand a heightened commitment to how we tell a story. Words are histories. This is one of the things I love most about writing, tracking down the indeterminacies of a field—even if it’s just a date, a fleeting feeling, or a hand-hewn floor joist—to craft the story.

Many of my participants told me why they choose certain building materials for reasons of economy or sustainability. For instance, John explained why he favored straw as a cheap, natural insulation and how he used scrap lumber whenever possible. But working alongside my participants also taught me that the architectural features of a hand-built home tell their own histories. Here the choice of building materials may create deep, affective connections to the Ohio River Valley. For instance, Jacob, a 38-year-old father of two participants, had this to say when I asked him about what building his straw bale home meant to him:

Jacob: Yeah, I don't know. It's just every inch of it is packed with stories and meaning.

Sean: Could you tell me a bit more about what you mean?

Jacob: I think it’s just the amount of work, and like Lisa [his wife] says, I don’t like to move. I never moved as a kid, so I don’t like change. If I’m in a place, I just think, “Okay, this is my place.” But also, just ‘cause every material in this house has meaning. I hand-sanded each one of these beams, and oiled them, and the trim in the upstairs and trim down here is made from cherry lumber that grew on my family's farm and we milled it up and brought it here. And even the clay
slip, the first clay slip that we did, my parents live close to a clay factory in Wellston, and they had a whole pallet of clay that got water damaged, and they knew somebody, and they were like, “You can have all these things of clay.” So, there’s that. And my uncle built all these cabinets and so it’s just. [pause] I grew up in a house that had been in my family since the 1800s. Same farmhouse, same family farm, and rural and small town. And like, that’s where I come from. Homebuilders like Jacob describe the species of wood they use and the time it took them to mill this lumber because these stories represent actions of environmental stewardship that join homebuilding to a deep-rooted sense of place. Often, the nature of my fieldwork—working alongside my participants, and in one case living in a participant’s home for two weeks—allowed me to limn out how the materials or design of a hand-built home tell stories and cultivate domestic habit. Sometimes though, these stories were hidden in plain sight, and all I needed to do was ask the right question over a cup of coffee.

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John’s house is small enough that, overhead, a single hand-hewn poplar joist spans the length of the home. Poplar, a native species to Appalachia, was once a popular choice for home construction, prized for its long straight logs and natural abundance. In fact, the Appalachian corridor along the Ohio river is home to a dizzying array of hardwood species including: Ash, Beech, Buttonbush, Cherry, Cottonweed, Chinquapin, Hickory, White Oak, Osage-Orange (a species crucial for primitive bow-making), Sumac, as well as the food-bearing Persimmon, Hazel, Walnut, Chestnut, and Paw Paw.
Despite the long history of logging, it’s one of earth’s most bio-diverse areas and, as Appalachian writer Erik Reece notes, “no region in earth’s temperate zone boasts a larger variety of forest trees.”\textsuperscript{13} The first western settlers to set foot on the banks of the Ohio spoke of pencil-straight Goliath Poplars some 200 feet tall and forests so thick that you weren’t sure if you’d ever see the sun again.\textsuperscript{14} Here, tall tales abound of keen climbers who traversed the Ohio territory without ever setting boot to ground.

In April of 1864, the Mineral Railroad company was founded with the purpose of building a coal-export line between Columbus and Athens, OH. Six years later, when construction was finished, coal, clay, and timber were the primary exports. With a new and efficient method of transportation, the logging and coal industries worked side-by-side in the Ohio River Valley often stripping lands of every merchantable stick of timber before sloughing off entire hillsides in search of coal. In Athens county alone 199,827,899 tons of coal were mined between the years 1920-1984. Even today, decades after the logging and coal boom, the foresting industry in Athens county generates an annual revenue of over 12 million dollars.\textsuperscript{15} But the story of Athens, OH is no different than most small-town histories in the Ohio River Valley—with industrialization centuries-old forests disappeared in a matter of months and very few locals saw any benefit.

The timber industry was among the first industries to divest local Appalachians of their land and homes, often exploiting the informal land arrangements that left many homesteaders without title or deed. Most disenfranchisement was accomplished by “Wildcat” surveyors who coaxed property, timber, and mineral rights from families with
the threat of future litigation. Without the necessary infrastructure or legal recourse, landowners also fell prey to timber agents offering 25 to 50 cents per tree for lumber that would fetch several thousand dollars down river. Over time, the Ohio River Valley thus became a space quickly colonized by corporate interests who put locally owned sawmills, like the one operated by John’s family, out of business. For instance, between the years of 1915 and 1924, Fordson Coal, a subsidiary of the Ford Motor company, acquired more than half of Leslie County, KY for logging. In another case, the New York coal and timber baron R.M. Broas organized a mass-buying venture of Appalachia relying on “20 corps of engineers and surveyors,” to net 16,500 acres leased throughout Pike county Kentucky during the 1890s. These leases, of which all but three were signed “by the owner’s mark” (in lieu of signature), granted Broas mineral rights for a period of no less than 999 years.

Figure 16: Poplar siding at a participant’s house on Swett Holler Road. Author image.
For generations, the men in John’s family have been either loggers or heavy equipment operators. When we worked together, John would sometimes break the silence with stories about how he learned these trades. “The old timers,” John would tell me, “kept their tools in burlap sacks soaked in oil to keep away the rust, and they’d sharpen their shovels with a whetstone to help with the digging.” When I pressed him during our interview to explain whether the land he grew up on informed his decision to build a home, John told me,

Yeah, Yeah. Well I guess I didn’t realize growing up how much I really need to be working with my hands, physically doing or creating something—that’s just how I am. I didn’t necessarily realize that growing up, but it did have an impact. Growing up, for instance, when I was young and we built a cabin out at my grandparents’ property. We went and sawed up all the lumber at my grandpaw’s sawmill and, you know, we built a cabin. And there was always that connection to the family business and my grandpaw’s property. We were always kind of around on the land so there was a lot of closeness with my cousins and everything else even though I probably don’t agree politically with nearly any members of my family.

For individuals like John, building a home is a political act of reclamation—one designed to push against the liminal history of Appalachia to move beyond legacies of exploitation and extraction. How home is built, and the stories accompanying home building, help cultivate domestic habits and affects geared toward sustainability and environmental
resistance. In this sense, building home becomes a new frontier for environmental activism in the Ohio River Valley.

By May of 1933, the federal government stepped in as the Ohio River Valley increasingly fell into corporate control. Yet, from the very beginning, federal oversight of Appalachia has done little to stem the flow of minerals and capital from Appalachia. The largest of these federal agencies, the Tennessee Valley Authority, was founded, in the words of President Franklin D. Roosevelt, as a “corporation clothed with the power of government, but possessed of the flexibility and initiative of private enterprise.” Today, the TVA generates an annual revenue of approximately 12 billion dollars, and its status as a publicly traded utility company has led to questionable deals between private interests and the federal government. To add to this, public acquisition of the Ohio River Valley throughout the mid-20th century resulted in the eviction of at least 125,480 people and the sale of two million acres of property. These evictions, undertaken by the federal government, taught many residents of the Ohio River Valley that Uncle Sam was no better than King Coal. In one incident reported by the Atlanta Constitution in its May 12, 1971 article on federal use of eminent domain, Vernon McCall, a disabled farmer, was evicted from his homestead:

On February 22, men of the U.S. Forrest Service broke into Vernon’s trailer house, dragged out a bed and a few other belongings, and then dug a hole with a bulldozer, rammed his home, his lean-to, his pig pen, and his little barn into it and
buried the whole thing. Having erased every trace of his home, they planted pine seedlings over it.\textsuperscript{21}

Histories like Vernon McCall’s teach people in the Ohio River Valley not to trust regulatory agencies who have long operated with deep industry ties. In turn, this mistrust results in performances of environmental activism rooted in a militant refusal to further exploit Appalachian land and people. John, for instance, told me he uses a composting toilet because “the idea of all the chemicals and energy that goes into me taking a crap in 5 gallons of water offends me.” After the interview, he showed me his son’s .16-gauge slug gun and the new .45 ACP pistol he bought the year prior.

The idealistic legacy of American conservation, most often told through the stories of Ansel Adams, Teddy Roosevelt, John Muir and national parks such as Yellowstone, simply rings hollow for many of my participants. Among the environmental activists and homebuilders I met, there is a deep suspicion of federally mandated conservation projects, derived from an enduring belief that, as organizer and musician Si Kahn writes, “the national forests [of Appalachia] are seen by the Forest Service to be used primarily by the large surrounding population of city dwellers [including] the urban population of the Eastern Seaboard.”\textsuperscript{22} Lance, another home builder I interviewed, typified this mistrust of regulatory and commercial interests—whether they be public or private. Over the past summer, Lance had begun milling the flooring of his home from dead ash trees. As we discussed the rise of the emerald ash borer and the ecological devastation of hardwood species throughout the Ohio River Valley, our conversation turned towards government regulation as Lance explained his mistrust of local zoning
board members stating that “The zoning inspector lives a mile up the road and he’s always poking’ his head ‘round even though he admits that I know the zoning laws better than he do.” Like all but two of my participants, Lance relies on a compositing toilet in place of a traditional septic system or sewer line. Two weeks after our conversation, Lance, along with four other homeowners in the surrounding community, received word that their permitting package for the use of composting toilets had been rejected. If the community was unable to install the requisite septic and water lines (a process that would cost upwards of 60,000 dollars) each resident faced eviction.

Like John, Lance is someone who I consider to be an environmental activist. Last summer, he installed an off-grid solar array to ween his homestead from coal. His entire house runs on a 30-amp circuit breaker, which, by comparison, provides enough power to run lighting for two rooms in an average American home. And beyond his own habits of consumption, Lance thinks of his house as an interactive experiment in sustainable living:

How I see it as, I’m going to do a lot of things that are good, and if someone can take one thing away from it, then that’s great. ‘Cause it’s not feasible for a family of five to live in a tiny house. It’s not feasible for everybody to use composting toilets. It’s not feasible for a family to dig a grey water pit. But if they take our lesson, they might change some habits. Our garden isn’t great this year, but [if they see it they might think] “Oh, growing a little bit of your own food is a good idea. I decided to do that.” If they take one thing away, it helps. You don’t have to be 100% to make a difference. You can learn from others.
I wouldn’t hesitate to call Lance an environmentalist. Yet, outside the Ohio River Valley, Lance’s mistrust of federally administered environmental protection and conservative politics fall well outside the norm of what performances typical “count” as environmental activism. But I view Lance’s activism to be rooted in a belief that neither state nor corporation have his best interests at heart. In his mind, both exist to make a buck off the little guy.

By 1974, in the Ohio River Valley, the BLM had amassed federal land parcels larger than Connecticut, Delaware, and Rhode Island combined, including 14 counties where more than 40 percent of the land was held in national forests. Today, the United States also exerts federal ownership over 4,000 million short tons of bituminous coal in five coal beds along the Ohio river. Although, to quote a 2002 U.S. Geological survey, “Ownership of surface rights does not necessarily imply mineral rights, through time, mineral rights can be acquired by the Federal government or can [be] reverted from prior owners.” For those familiar with the legacy of mineral extraction in the Ohio Valley, however, the USGS’s statement regarding the ability to “revert” mineral rights from prior owners is particularly Janus-faced given that these lands were often seized, as in the case of Vernon McCall, under the auspices of eminent domain and public improvement. So, in place of reverting mineral rights back to native Appalachians, federal agencies have begun auctioning off timber, gas, and coal rights to private corporations in ways that blur the line between environmental stewardship and profit-driven exploitation. For instance, my conversations with Lance occurred while the BLM was in the process of leasing mineral rights for over 700 acres of the Wayne National Forest near where John lives as a
complement to the 1,200 oil and gas wells already in operation across the 240,000-acre preserve. While Lance faced the possibility of eviction for the use of a composting toilet, 22 fracking companies won exclusive mineral rights to southeast Ohio with bids as low as two dollars an acre.  

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Back on Haga Ridge, I sit at the kitchen table as John pours coffee grounds from a plastic Tupperware container. John’s pulled out an old family photo album since I’ve stopped by to ask a couple follow-up questions about his grandpaw Melvin and the family business. As he turns to light the stove, John catches me eyeing the poplar floor joist overhead. “I hand-planed that sucker with a scrub plane. Took forever. Threw my elbow out of whack for a couple months. All that repetitive action, ‘ya know?” John pours coffee into two earthen mugs the size of small bowls. As we walk the length of the house, John explains the history of Pine and Poplar in the Ohio River Valley, and I think about logging, labor, and the vast material ecology of home and identity.

How a tree becomes a piece of lumber, or how a house becomes a home are both processes that occur within a material ecology of historical, affective, and biological forces. For example, you may have noticed that when Vernon McCall was evicted from his land by the US Forest Service, pine seedlings were planted over the old homestead. That’s because conifers—such as Douglass fir and white pine—tend to be the fastest, easiest way to encourage reforestation after mining and logging made native hardwood species hard to come by. So, in the wake of WWII, when the first generation of GI-bill veterans set out to purchase a home, builders found a cheap, alternative source of lumber
planted by TVA workers who, over the course of the Great Depression, reforested 212,000 acres of land with over 295 million pine seedlings. And so over the course of the 20th century, pine began inroads in the Ohio Valley, replacing native hardwood species to forever alter the design and construction of the American home. For my participants, it is within these material ecologies that the story of a poplar floor joist or a black walnut table becomes part and parcel of larger family histories, botany, and politics. Here the materials of a home have their own stories to tell as companion species enveloped within a larger material ecology of dwelling in the Ohio River Valley.

To live in Appalachia is to inhabit a liminal space—a space so often forgotten by America that yet, because of its vast natural resources, remains inseparable from the daily habits of American consumption. And likewise, my participants describe the design and construction of their homes to link dwelling to larger material ecologies structuring daily life in Appalachia. The habits, culture, and consumption practices these people perform are quite literally scribed into the walls of their homes. It’s a “back to the earth” brand of environmentalism based, first and foremost, in the stories and places of the Ohio River Valley. Given this history, vernacular homebuilders like John strive to dwell on this land without destroying it. Their sense of home is derived from the structures they’ve created and the stories that homes stand in for. For these activists, the house then becomes a home because of specific domestic performances sustained through daily action. In this way, the vernacular building traditions my participants draw from allow them to meld environmental stewardship with daily habit.
Tile Saws, Earthships, and Rhythms of Dwelling in a Deep Ecology

Tile Saws and Laundry Soap

Home is a Deep Ecology.¹ It is July. I am cutting glass bottles on a wet-tile saw. As water and ground glass rain down, I hear two panicked screams, and I recognize Laura’s voice. Her pitch is urgent. Her plea cuts through the summer heat in staccato:

“No. Sir.”

“NO! SIR!”

I shut down the saw, take off my facemask, and run towards Laura and Rob’s home. Inside, atop an eight-foot stepladder, Laura’s four-year old son Brandon reaches for a galvanized aluminum trough containing ducklings. An electric heat lamp dangles overhead, and the concrete floor is a mess of pipe fitting tools, scrap lumber, and orange extension cords. By the time I arrive though, Laura has Brandon corralled in her lap as the youngest child, Zeke, sleeps in a nearby crib.

Laura is an off-grid homesteading momma.² If you meet her, chances are that she’ll be wearing muck boots. She has a first, second, and third shift. This weekend to I’ve come to interview her husband Rob and help finish a bottle wall on the southeast side of their home. Rob is in his mid-thirties with a chinstrap beard, strong Roman nose, and a perpetual sunburn. When I see him, he’s usually wearing a cut-off t-shirt, cargo shorts, and a pair of worn flip-flop sandals. When we last worked together, the faint twang in Rob’s voice echoed off the concrete slab as he told me, “everything changed when we had our first kid.” Since I don’t have kids, I don’t know what to say, and we mix earth plaster for a bit in silence before Rob continues. “Actually,” he says (gesturing
to the wheel barrow, tires, and electric floodlight inside), “‘this,’ started when we began making our own laundry soap. Laura found the recipe online and thought, ‘why not?’”

Although the homemade soap powder didn’t smell like much, Rob told me it made them pay attention to how things were made and who bore the costs. After soap, Rob and Laura started hanging out with the kind of people who worry about carbon footprints and global warming. Rob then found a job as an electrician’s apprentice. When he topped out six years later, he’d already started construction on an Earthship-inspired home for the family. Together Rob and Laura would grow whatever they needed, and Rob would find work whenever money was tight.

Figure 17: Laura’s kitchen. Author image.
Living on a build site is challenging, but for Laura and Rob, “challenging” is exactly what they want. Nestled into the gentle slope of a grassy hillside, their home stands as a cathedral to the idea that humans are, in the words of Deep Ecologist Bill Devall, “not above or outside of nature.” Strips of fly paper hang from rafters above white plastic buckets next to the sink, as Laura’s sacristy, the kitchen, is awash in the habits of a homestead. Since Rob is still plumbing the house, Laura must fetch water daily from a nearby cabin to cook and wash dishes. Although this is a lot of work, it reminds her to respect every drop and pass this lesson of conservation on to her boys.

Earthship-style homes like Laura and Rob’s are a popular vernacular design for off-grid, eco-homebuilders. Proponents of this tradition build their homes with scavenged or recycled materials and often speak of dwelling as a process of consumption, which ripples through space and time to impact other species. These “Earthshippers” believe that the habits of their home should respect nonhuman matter, forces, and species who are, according to Bruno Latour, “actants” capable of affecting, and being affected by, other beings. This chapter details three stories from my fieldwork to show how participants like Rob and Laura perform home within a Deep Ecology of human and nonhuman forces to resist what political theorist Jane Bennet refers to as an age-old habit of “parsing the world into dull matter (it, things) and vibrant life (us, beings).” Like all my participants, Earthshipers view home as a space for political action. In this case, however, the design of their homes—and the habits these homes inspire—become synonymous with an ethics of environmental stewardship that locates dwelling within an
incredibly complex ecosystem of historical, biological, and affective forces wrought through daily habits of the Anthropocene.

Figure 18: A bottle wall at a house on Kitten Run creek near Aimesville, OH. Author image.

Deep Ecologies, Shit Buckets, and Domestic Rhythms

Laura loves her kids. She particularly loves when they play with the Earthship. Since they’ve moved to their new home, Laura tells me that Brandon usually plays in the garden or pretends to work on the plumbing with a toy tractor. The garden, toys, and performance of play all engrain sustainable habits, and, as proof, Laura tells me with a hint of pride that “Brandon’s already started asking about where the water goes when it goes down the drain.” For Laura, this is important for because she sees her house as a tool to teach her children about the environmental costs of everyday life.

As environmentalists, Laura and Rob built their home because, to quote the couple, “We didn’t like the fact that we didn’t know where our resources came from.” But when Laura thinks about the environment, she also thinks about her children’s future.
Her environmental activism and domestic habits are geared towards teaching her boys about the ecological impact of daily life. Or, as she puts it,

I would say that I want to give them [her boys] that wonder and awe about the natural world that I didn’t really get until I became an adult. As an adult I am like totally mystified by it, and I would love to show them how connected everything is. So that they can view the world in a different way to learn that every action they take has an impact on the environment around me and the environment everywhere. So, passing that onto them and having that play out in their day-to-day life is one of the reasons [we built an Earthship].

Later in the day, Laura reflects on this sense of awe, as she kneads flour and water in a stainless-steel bowl for tortillas, describing how she decided to raise ducks and chickens to teach her sons about the intrinsic ecological value of other species. From this experience, she hopes that the boys will learn to respect these animals for the fertilizer and food they provide.

Laura’s homestead cultivates daily habits of dwelling to resist the subconscious tendency to, as Devall writes, “view nature as a storehouse of resources which should be ‘developed’ to satisfy ever-increasing numbers of humans and ever increasing demands of humans.” 6 Although vernacular design of her home helps favor certain rhythms of consumption over others, during construction, these rhythms overlap, coalesce and conjoin in unanticipated ways. Building an Earthship means that Laura’s home is both a jobsite and nursery. On the southwest wall of the home, tucked between the family tent and a mess of scrap lumber, there’s a blue rectangular carpet with toy trains, knee-high
chairs, and a yellow plastic craft table. When she’s not here watching the kids, Laura spends her time hauling water, working on the house, or cooking. During my last day at the Earthship, Laura fries oatmeal and black bean patties over a two-burner hotplate as she explains how she sees her home as a form of environmental activism:

We started talking about building our Earthship when Brandon was probably three or four—we wanted to give him a new life. I wanted to do something different with our kids. I wanted my kids to think about the conservation of water and energy. [I wanted them to be] really being mindful and not making quick convenient choices. Not just flipping on light switches because I want the whole place lit up.

Laura believes that the design of a house creates habit. She is attuned to the way a home influences consumption through domestic rhythms of washing dishes, raising food, and keeping warm. In turn, I think of these rhythms, much as French sociologist Henri Lefebvre did, as enveloped material forces implying social practice within an ecosystem.7 Such performances of home thus attempt to minimize individual strain on an ecosystem through sustainable rhythms of home. To riff on Gramsci’s classification, from an ecological perspective, Laura’s performance of home represents an “organic” attempt to treat all beings with respect. It is a performance of home rooted firmly in the rhythmanalysis of indweller, habit, and habitat that, according to Lefebvre, centers on the repetition of movement through cyclical processes of “birth, growth, peak, then decline.”8 Within this flywheel of consumption, turning on a light or flushing a toilet create palpable reverberations within a larger plenum of space, time, and action.
Many of the builders I met told stories about the materials they used and how these materials stood in for larger histories in the Ohio River Valley. By doing so, however, these individuals also reveal how the design of their house allows them to rethink home as a space of rhythmic stewardship. Carrying your own water or composting your own manure predisposes a certain mindfulness about what it takes to build a home through daily habit. With respect to the latter, Sasha, a tiny home builder who lives besides a particularly sleepy section of the James A. McGee Appalachian highway, had this to say when I asked her to explain her belief that home is “very much related to the interaction between all things that live and the necessity for reciprocity”:

I very much look at this place as a medium through which resources come and go. I will bring food in and eat it and try to get my food from good places, and then I’ll shit in my bucket back there, and I’ll dump it in the woods or the composter. So, I feel like my home allows me to think about what comes and goes within it.

Women like Sasha and Laura describe home not as an architectural phenomenon, but as a space of daily habit and material circulation. In daily habit, these individuals perform home to recognize non-human “earth others”—including gut microbes, goats, and long-dead carboniferous (i.e., coal producing) flora and fauna—as vital to dwelling. Within this ecology, daily domestic practices acknowledge nonhuman forces, which bump, echo or grind against each other to, in the words of Jane Bennett, “constitute a series of mutual transfers between human and nonhuman materials.” As a result, my participants do not see dwelling as a uniquely human act. To understand their habits then is to understand
dwellings as a (post)human condition within a what Norwegian philosopher Arne Naess refers to as a Deep Ecology.

In 1973, Naess coined the term, “Deep Ecology” to refer to his idea of “organisms as knots in a biospheric net or field of intrinsic relation.” As Bill Devall explains, Deep Ecology is premised on a gestalt of person-in-nature. The person is not above or outside of nature. The person is part of creative ongoing. The person cares for and about nature, shows reverence toward and respect for nonhuman nature, loves and lives with nonhuman natures, is a person in the “earth household,” “lets being be,” and lets nonhuman nature follow separate evolutionary destinies. Deep Ecology, unlike reform environmentalism is not just a pragmatic short-term social movement with a goal like stopping nuclear power or cleaning up the waterways. Deep Ecology first attempts to question and present alternatives to conventional ways of thinking in the modern West.

Early Western precursors to Deep Ecological thinking include Baruch Spinoza, Henri David Thoreau, Walt Whitman, and philosophers of dwelling, such as Martin Heidegger, all of whom critiqued overly anthropocentric definitions of “being.” Deep Ecologists thus believe that rhythms of dwelling belong to a larger polyphony of human and non-human actors. Within this ecology, some rhythms of dwelling are passed down over generations in the form of genes, stories, and tight bundles of interaction. Others, like the path of water in a creek bed, flow endlessly in time, etching the path of least resistance as life is created, dies, and decays.
Chances are that you’ve thought about Deep Ecology even if you didn’t know what to call it; it’s an inevitable byproduct of a world scored by the endless repetition of past lives. To recognize Deep Ecology then is to recognize that our ecosystem is not immutable and that we rely on other species to survive. In the face of this reality, my participants build homes that attune them to the flow of matter, resources, and affects within an ecosystem. For them, home is not just about them—it’s about everyone else. They grow their own food, build their own house, and respect that fact that others die so that they may live. Through Deep Ecology, they attune their homesteads to everyday patterns of consumption in the Anthropocene.

Deep ecological performances of home substitute an ethos of domination for an ethics of care. In contrast to Humanism’s use and abuse of non-human beings, within a Deep Ecology, other species are no longer a means to an end, and to quote performance scholars Travis Brisni and Jake Simmons, “we are no longer the ideal against which all comparisons are to be set.” As a result, Deep Ecologists often think of nonhuman life in terms of companion species. Donna Haraway, for instance, defines companion species as “organic beings such as rice, bees, tulips, and intestinal flora, all of whom make life for humans what it is—and vice versa.” For these activists, Deep Ecology is predicated on the belief that ethical dwelling unfurls in mutually beneficial, symbiotic actions across an ecosystem.

To know about Deep Ecology is one thing. To feel it, though, is something entirely different. To this end, theorists of affect, most notably Kathleen Stewart, Sarah Ahmed, and Brian Massumi, contemplate how the body attunes to an environment
through objects, materials, and other lifeforms. But there is no consensus regarding exactly how affect flows between body and environment to enact life-alerting trajectories. Massumi, for instance, likens it to a “Doppler effect” (i.e., it is subject-relative and ever changing), while Kathleen Stewart compares affect to an “atmosphere” or “bloom space” wherein,

Everything depends on the feel of an atmosphere and the angle of arrival.
Anything can feel like something you’re in, fully or partially, comfortably or aspirationally, for good or not for long. A condition, a pacing, a scene of absorption, a dream, a being abandoned by the world, a serial immersion in some little world you never knew was there until you got cancer, a dog, a child, a hankering. Another little world is suddenly there and possible. Everything depends on the dense entanglements of affect, attention, the senses, and matter.15 Regardless of the metaphor used, individuals interested in closing the human/nonhuman divide agree that there is neither timetable nor notice for such attunements. In response, my thinking on domestic affect forgoes temporal or spatial metaphors in search of Deep Ecological rhythms and habits of dwelling.

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If you’re like me, the affective clout of Deep Ecology reveals itself when you see honeysuckle and pine saplings take root among the ruins of an abandoned mining town. Or when an old-growth forest extends mossy tendrils into freshly shorn pasture. Recognizing a Deep Ecology means yielding daily to moments, which remind you of human fragility in the face of ageless, primeval rhythms. It is a sublime awakening that
Lisa, an archeologist and straw bale homebuilder I interviewed, compared to the slow, plodding course of geological events, which “take place over a long time, but then people are like, ‘Oh, it just all of a sudden happened.’ When I look back on it though I think, ‘Oh, it was an aha moment,’ but it probably took years to get that aha moment crystallized.”

Moments of Deep Ecological sublime can occur in an instant. Or they may accumulate in a steady stream of bubbling thought. Sometimes, though, their lessons slip across generations by accident. Sasha, for instance, explains her decision to build home as the result of one such encounter:

My dad had this friend when we were younger and she went through this period where she wasn’t killing anything or harming anything. So even if she had a tick she would pick it off and throw it away. Or an ant, she would just brush it off and would never kill it. Or a spider—she would freak out but she wouldn’t hurt it at all. And I wondered “why is she doing that?” and I started to think about this as my younger self and started realizing the value in other forms of life.

As Sasha grew older, she realized that she’d be happier if, to quote, “I knew where my resources were coming from and I could generate them myself.” Like most homesteaders I met, Sasha views her home as “closed permaculture loop” where outside materials are wholly integrated, used up, and then returned to the environment. When I asked Sasha to provide a specific example of this Deep Ecology in action she shared a story about making cider:
Well one time I collected apples and I smashed them to a pulp. I squeezed the juices out and made hard apple cider. And with the pulp, I fed pigs and cows, and then I took pig and cow manure and brought it back to the apple trees. Then I made this hard cider and got drunk and went dancing. It was this idea of having this luxury and having this good time with my friends, but, then at the same time, considering where that comes from and all the beings involved in that action.

Sasha’s dance maps an ontological choreography of home as a space where dwelling is not restricted to humans. It is the fitful dance of companion species that, as Haraway notes, makes “self-certainty and either humanist or organicist ideology bad guides to ethics and politics, much less personal experience.”17 As a more-than-human performance of Deep Ecology, Laura and Sasha reimagine home as a space of cross-species socialization and daily habit. Here, rhythms of homesteading consider what it means to dwell in a society where consumption now occurs at break-neck speeds. In response to this frenetic cadence, my participants perform home in ways that minimize the environmental impact of daily life.

Deep Ecologies in an Earthship

I open the rusted livestock gate and walk past an earthen goat barn. It’s July and the air smells sweet like fresh cut alfalfa. The barn, like the rest of the farm, looks out of place. After a while, you come to expect a certain pastoral aesthetic in southeast Ohio: white clapboard siding worn silver with age, tar-paper roofing, and the occasional Mail Pouch tobacco barn. And yet, here is this building with stout white plaster walls and thick wooden beams, like something pilfered from a James Harriet novel. Here, a farmer would
meet you just outside a hedgerow dressed in a woolen sweater, knit cap, and knee-high wellingtons. As he fished out a match to light his briar pipe, he’d tell you how the dogs got worms and something’s not quite right with the sheep.

To my left, two dogs sprawl in the shade of a spindly Burr Oak. The smaller of the two dogs, a black mutt, sniffs the air before meeting me with his hackles up. After I offer my palm in greeting he follows, nipping at my heels as I continue down the road. Reaching the house, I find Angie hunched over the kitchen sink straining goat’s curd from whey. The sight of the strainer reminds me of my mom wrapping homemade chèvre in muslin cheesecloth when I was a child. Angie gives me a hug, asking if I found the place alright. “You’re in God’s country now and he only lets certain people in,” she tells me.

When I sat down to write this chapter, I knew that any story about dwelling in a Deep Ecology would revolve around Angie. Angie and her husband Benjamin live near the mostly abandoned coal-boom town of Philo, OH. Angie is an environmental activist, and she designed her home as a space from which to consider what it means to live in post-coal Appalachia. Her farm doubles as a job training site for individuals interested in the solar industry. In the spring, she hosts permaculture workshops to encourage environmental stewardship. Her story, like many of the participants I met, is very much one of recognizing a Deep Ecology of home.

But Angie’s story is also about the home she built and how the design of her home influences habit. Earthships were some of the first domestic structures to apply a
Deep Ecological analysis of American consumption and their creator, architect Mike Reynolds, served as a tremendous source of inspiration for many of the builders I met including Rob, Laura, Sasha, and Angie. So, I’ve brought Mike and Angie’s story together to investigate home as an ecological union of human and nonhuman histories wrought over time.

Figure 19: Angie’s Earthship. Moxahalla, OH. Author image.

The Early Years

Angie was a scrawny spit of a kid. Angie’s mother grew up during the lean years of the Dustbowl and carried with her memories of empty pockets, Hoover blankets, and threadbare trousers. During the Depression, the family lived on a farm where nothing was
thrown away and everything found a new purpose. What Angie remembers most from her childhood is how her mother saved everything,

She could make a dress pattern out of a newspaper, without ever seeing a pattern at all. I don’t think she ever had a pattern to make something, and reinvent their clothes for the younger kids, and things like that. So, I think I got that from her. And I feel proud of that because I think it serves me very well in my life to be clever about reusing, and repurposing.

So, Angie learned the rhythms of homesteading at a young age. Since her mom was a whiz with a needle, she taught Angie how to darn. If the hole was too big, Angie’s mother would patch it, and if the patch failed, she made Angie remove the buttons and rip the zippers out for something else.

Angie’s mother knew what it meant to build a home, even if she wasn’t a braggart about it. At least that’s the way Angie remembers it, telling me,

But I think my mother influenced me a lot, in that while she wasn’t a very good person, she was a woman who was way ahead of her time. She could build things. She did it very discreetly. My grandfather, who was her father-in-law, would come, and she would say, “I was building with him.” But now I can see, she [emphasis] was actually building herself.

Every so often, Angie would come home from school to find a new closet, or some shelves made from scrap lumber. Angie wanted to build too, but nobody, her mom included, would let her.
So, Angie built homes in her dreams. She learned to play home. When her grandmother hung linens out to dry, Angie would sneak out to the clothesline to grab a sheet or two along with some clothes pins. Draping the sheets over a picnic table she’d imagine the home of her dreams. When she grew up, she wanted a house with big thick walls. Like a fortress. The kind of walls that were cool to the touch and fireproof. Angie had been afraid of fire as far back as she could remember. Her earliest memories were of fire spreading through the neighborhood, engulfing house after house in thick acrid plumes of cinder and smoke.

But Angie’s mom didn’t want her to build. She wanted what Angie calls a “prissy girl.” She’d scold Angie if Angie came home with a ripped dress or didn’t put her hair up. Sometimes, though, on the walk home from school, if the weather was right and no-one was looking, Angie climbed on top of the swing set across from her house. There she’d hang upside down, feeling the touch of cool metal against the back of her knees until her head felt like it was about to explode. Before heading home though, she was always careful to rub away any dirt smudges. After all, her mom wanted a “prissy” girl, not a rebel.

Years later Angie was married and living on a farm. She learned, like her mother had, how to be a farmer, and, according to Angie, “I grew nearly everything we ate.” They were poor—too poor to afford McDonald’s, so Angie taught her daughter how to trellis tomatoes and where to plant basil in the spring to ward off June bugs. By fall, mother and daughter were canning together, and they had a larder stocked full of mason jars collecting the dust of ancient lives.
If you strip away our habits, we are carbon. Nothing more. I think parents realize this better than most. After all, so much of parenting is teaching you child, subtlety (and not so subtlety) the ways of life. To prepare them for the future, you instill daily habits at home: brush your teeth before bed, sweep the floor, don’t leave dirty dishes in the sink. Your child takes the first wobbly steps towards an identity, and you’re hopefully there to catch them when they fall.

Like her mother, Angie perfected the rhythms of homesteading. Even today, she thinks about how the design of a home facilitates habit:

So, it is about everything. It’s about how does that building function to support your life? Most people do not support their life through their habitat, they just go there and put their clothes down, watch TV, use the microwave to heat up something, and get up the next day and do the same thing. This is not how we live life. We want to nourish ourselves through how we live our life. And that’s also what's valuable about this building.

Angie and Benjamin tried to pass the rhythms of homesteading onto their daughter. Ultimately though, it’s up to the child to follow your lead and some habits wear thin over generations. They were careful not to push or prod, but soon Angie and her daughter were no longer speaking. I never got the full story, but after Angie and Benjamin were awarded custody of their granddaughter Caitlyn, Angie kept telling Benjamin, “I don’t know what kind of house we’re going to build, but its ‘gotta make a difference for people besides us, it’s ‘gotta have an impact on Appalachia, because this region, no matter what goes on in the world, it just never gets better.”
In the late ‘90s, Angie and Benjamin left Ohio for Tampa, FL. Angie found work as a domestic abuse counselor, but she couldn’t shake the feeling that she should be back home. Then one night, when Caitlyn was five months old, Angie heard an interview on 88.5 WMNF, the local community radio station. The anchor was interviewing a young architect named Mike Reynolds who built houses out of garbage. As Angie tells it, “I looked at Caitlyn because she’s sound asleep in my arms, and it’s so wonderful when they're all snugly like that, and I said ‘Caitlyn, you and your momma are ‘gunna do this.’”

The brain child of the self-proclaimed “outlaw architect” Mike Reynolds, Earthships cropped up in the 1970s as an idealistic alternative to the mass-produced suburban housing of the ‘40s and ‘50s. After graduating from the University of Cincinnati in 1969, Mike made a name for himself as an architect willing to throw convention by the wayside in search of what he called “radically sustainable” living.

One of Mike’s first inventions was a “brick” of eight aluminum cans bound by bailing wire. The patent application, filed in 1971, describes the brick as “a can block made almost entirely of waste materials, so that the block not only disposes of the waste materials [but can also] be made and laid by a relatively unskilled person, reducing the demand for wood in residential construction.” But Mike’s dreams were a lot larger than bricks. He imagined a home that would harvest water and sun from the sky, grow its own food, and recycle waste without the use of fossil fuels.
By the mid-‘70s, Mike moved to Taos, New Mexico and began building homes out of scrap aluminum cans, glass bottles, and whatever else he could find. His first creation was a home fashioned from beer cans nicknamed the “thumb house.” In Taos, Mike began cultivating an ecological aesthetic as he studied both flora and fauna. Among the rugged Sangre de Cristo Mountains he found inspiration—a kind of sublime beauty forged in a timeless life-or-death struggle for water, shelter, and nutrients. A beauty personified in the gnarled limbs of the Mesquite bush and the looming Ponderosa pine, with its scaled bark covered in pitch, like palm-sized plates of armor, to protect the tree’s heartwood from fire and lightning. But also, a beauty alive in the delicate yellow blossoms of prickly pear cacti and the ghostly apparitions of White Yucca bathed in moonlight.

In New Mexico, Mike saw firsthand how scant ecological resources demand a delicate balance of being and how beauty can arise from this scarcity. By studying the Deep Ecology around him, he learned how the wispy pastel shoots of purple-three awn, black grama, and sedge grass draw nutrients from the rocky soil through expansive root systems that bloom underground to prevent erosion. New Mexico presented an arid aesthetic absent in the verdant hillsides of southern Ohio. Here the jackrabbits were leaner. Wolves still prowled the mountainsides.

For centuries, architecture sought to lift itself above ground in a quest, like the tower of Babel, to reach the heavens. There were the Pyramids of Giza; the Luxor Obelisk at the center of the Place de la Concorde in Paris; and the gleaming modernist skyscrapers in the bustling cities of Beijing, New York, and Tokyo. But architecture, for
Mike, was rooted in a return to the earth, and, in New Mexico, he drew inspiration from a nearly 2,000-year-old-vernacular tradition of adobe earthen construction.21

Figure 20: An exposed tire foundation. The southward facing windows to the right of the tire wall are orientated to receive winter sun and double as a passive solar feature. Cedarville, OH. Author image.

Mike settled on the name “Earthship” for his final design. The basic concept involved mounting a large tire wall into the side of a hill. This siting worked with natural topography, rather than against it, to swaddle inhabitants in an earthen blanket that minimized wind chill and heat loss. (As a result, Earthship homes naturally maintain an average internal temperature of fifty degrees.22) In addition, Mike included a south-facing glass wall to allow winter sunlight to pass into the home. This passive solar design
harnessed the principal of thermal mass to trap solar insolation (i.e., heat) in the concrete floor and earth-berm walls. Moreover, since the summer sun travels higher in the sky, with the proper roof pitch and insulation, owners could block sunlight from entering the home on the hottest days of the year. Mike’s Earthship operated as a biome—part home, part greenhouse—to rethink home as a system rather than place. The result was a vernacular dwelling that took its surroundings into consideration to minimize consumption.

The Earthship was an instant success. Early builders learned to direct water runoff from metal roofing into cisterns to supply water. Homeowners also began recycling spent “grey-water” with indoor gardens along the front glass wall. As an architectural movement, the Earthship rethought domestic consumption to turn refuse into a natural resource. In this manner, the Earthship doubled as a philosophy of home to carefully examine the circulation and flow of resources within an ecosystem. It was a movement that, as Angie explained, was premised in the mantra “Live simply so that others may simply live.”

Tinkerin’ with Trash

When she first set foot in an Earthship, Angie fell in love. She found the small, u-shaped rooms charming and quaint. The thick, white-washed plaster walls were naturally fire proof and made completely from recycled materials. The home felt welcoming. Even today, Angie thinks of her home as an old friend:

So, I think the house is our friend and so how does friendship work? You learn from each other, you don’t take advantage of each other, you keep things going so
it all ends up being healthy and works well. And it really is a friend to us. It supports our life, it doesn’t just sit there.

With an Earthship, Angie and Benjamin could imagine a new life for their granddaughter. They could teach her the rhythms and habits of homemaking. The Earthship could be so much more than a home—it could be a way of life. Once Benjamin and Angie realized this, they packed their bags and came home to Ohio.

At first, the land company took Angie to coal slags where the ground was pitted and nothing grew but briars. “The land was good for hunting,” the real estate agent told her. “I don’t want to kill anything,” Angie replied, “show me something else.” After that, the agent gave Angie a list of addresses and let her visit sites on her own time.

When Angie first arrived at the property in Moxahalla, her heart sank, “I thought it was the most horrible place. I couldn’t believe it.” The property was just the side of a hill, too steep for building. Nothing grew on this “reclaimed” land save for sparse brambles of buckthorn and honeysuckle. Looking for flat land to build on, Angie slid down the hillside, grabbing hold young saplings for balance. Why had the agent even put this address on the list?
After picking the beggar’s buttons from her trousers, Angie drove down to the nearest gas station to use the payphone. As the phone rang, she thought about giving the real estate agent a piece of her mind. But Appalachian roads are difficult to navigate—‘round here it can be hard to keep Sunday Creek apart from Monday Creek and Raccoon Creek separate from Little Raccoon Creek. “Oh, you turned right?,” the agent explained, “You should have gone to the left.” “Yeah good point. I should have gone to the left all
my life,” Angie replied. The agent didn’t get the joke, and Angie hung up the phone. Benjamin was out of town, so she decided to wait and see the next property with him.

The first thing Angie and Benjamin noticed at the next listing were the quaking aspens with their chalk-white bark. It was a cold when they visited, the middle of winter, and the trees still had their leaves, which fluttered slightly in the wind as Angie weighed the possibilities: Was the hill too steep to build on? How would they get the building materials to the site? Was this project even feasible?

What makes an aspen is the root—the leaves, bark, and lumber are all tertiary. There is also no such thing as “an” aspen for every tree in an aspen colony remains connected underground by a vast, sprawling root system. Once this root system matures, it sends up new shoots to replace the dead. The oldest aspen colony, known as the Trembling Giant, is an estimated 80,000 years old and is said to weigh at least 6,000,000 kilograms.\textsuperscript{23} Perhaps better than any other species then, aspens represent being as a process of daily regeneration within a deep network of ecological forces. In turn, I see Angie’s story of the quaking aspens as a reminder that humanity retains no special privilege; we are nothing more than a faint glimmer, a tiny speck in deep time.

Because aspen trees are essentially clones, they are some of the first flora to regrow after a fire, or in the case of an old coal town, flourish in the wake of strip mining.\textsuperscript{24} Those aspens had a resilience Angie sought, and turning to Benjamin she told him, “Let’s write the check.” When they began construction, Angie built a crude sundial out of spare 2x4’s. Once Angie got her bearings with the sundial though, she realized that the aspen colony lay in the direct path of the new home. As Angie remembers,
Everybody was telling me you're 'gonna have to cut down all these aspen trees, because you're never 'gonna get sun into that building," but I reckoned that in the winter there are no leaves on the trees, so perhaps that would make a difference. And those trees did not impede one ounce of light onto that site.

Angie was determined not to bend the land to her will. If need be she would prune the aspens, but if fire wouldn’t kill them, there was no way she could. The aspens had been here long before Angie, and she would need to learn how to live with them.

Years later, Angie still thinks of her home as an extension of its surroundings, and the design of her home forces her to consider how domestic habits bloom within a Deep Ecology:

Well, I mean it’s my idea of home because that’s the home for all of us. I think if you ask people who come here, they think [pause] they just think it’s the wildest thing like [we live] on another planet or something like that. But I think it creates a connection to remind us that we are just part of everything. And that we have a responsibility for our role in being that player, being that cog as I say in the wheel. And as a cog in the wheel, if I mess up everything messes up. [pause] It has been painful and frustrating and we’ve had to then sit down and have a lot of conversations about what we are ‘gunna do differently and how we are ‘gunna retrain ourselves to think in a culture that doesn’t think like we do, and so we take time to consider those things. This is our home. We live on the Earth. So, it isn't about that building so much as it is everything else.
Angie’s goal of making a home for “all of us,” reflects the concept of Biocentral Equality defined by Bill Devall and George Sessions as the “intuition that all things in the biosphere have an equal right to live and blossom and to reach their own potential.” On Angie’s farm, all species have intrinsic value, and Angie views her Earthship as home to many ecological actants.

Earthships became a cultural movement that Mike began cashing in on. He’d always cultivated somewhat of an outsider aesthetic with long unkempt hair and a penchant for distilling the philosophy of environmentalism to folkisms. “If you walk the walk, you don’t have to talk that much,” was a favorite saying of his. Still, Mike wasn’t perfect. He had a habit of selling shoddy blueprints that one participant derided as “shit he ‘musta wrote when he was stoned.” Most of all though, Mike didn’t keep up on his paperwork, so after a few formal complaints, he lost his license.

The Earthship wasn’t perfect either. The front glass walls tended to leak, and without the proper drainage, the house was damp and prone to mold. When coupled with the lack of windows along the earth-berm walls, poorly designed Earthships felt more like a cave than home. The biggest problem of the Earthship design, however, was the labor needed to install the tire wall.

The Earthship is about as carbon neutral as it gets but requires a staggering amount of labor to turn dream into reality. The “heart” of an Earthship is the tire wall, which allows builders to upcycle a hard-to-recycle commodity in the service of dwelling. Without the tire wall, an Earthship is little more than a hole in the ground. But building a
tire wall is a lot of work. After a foundation is excavated, the homeowner lays the first course of tires with a slight curve, which mimics the graceful bow of a beaver’s damn, to deflect external pressure from the surrounding hillside. Dirt is then shoveled into each tire, and struck with a sledge hammer. Once this soil rings like rock under the weight of the hammer, the next course of tires is installed. A modestly sized Earthship, like Angie’s, requires thousands of tires and countless wheelbarrow loads of dirt. Thus, whereas, most home builders measure house framing in weeks or months, it’s not uncommon for Earthship construction to take years.

Mike recognized this problem early on and began peddling Earthship construction as a labor of self-discovery. The Earthship was more than a home; it was a way of life. Building thus took on the fervor of a self-improvement project, and Mike was quick to point out the physical benefits of pounding tires. He’d tell anyone, with the nuance of a salesman willing to make a small concession for a larger payout, “Yeah it’s physical making bricks from tires. What would I rather do though? Go lift weights starting at a TV or beat dirt into tires and make a building.” But there was also a spiritual dimension. Through the pain and sacrifice of building, the home became a “cradle of being” where ego and dwelling are united through architecture.

The home, as French philosopher Gaston Bachelard, notes represents an extension of the human soul, “there is ground for taking the house as an analysis of the human soul . . . Our soul is an abode. And by remembering ‘houses’ and ‘rooms’ we learn to ‘abide’ within ourselves.” Many of the participants I met framed the labor of homemaking in similar terms, citing their home as an expression of spiritual and aesthetic beliefs. For
example, Stanley, an Appalachian cob builder, summarizes the relationship between spirituality and building a small cob house:

Absolutely, spirit, art and regeneration is one way I put building and living together. It has to be as fun as you can make it and as beautiful as you can make it and as inspiring as we can do it. So yes, spirit, art and the science of earth care, which is a whole predisposition of rising consciousness and regeneration, gives new meaning to [how I think about] sustainability.

Whether he knew it or not, Mike’s idealistic vision of building as an extension of self-improvement also drew from an established tradition of conflating labor, home, and identity. As rhetorical scholars Leroy Dorsey and Rachel Harlow note, tales of independent, frontier dwelling operate as a kind of “toil and effort” narrative undergirding American mythology.31 It is a folk history that calls to mind both the rustic architectural lineage of frontier log cabin and the democratic poetry of Walt Whitman, who wrote of “tan-faced,” “sinewy” pioneers who sang the praises of manifest destiny and cleared land with “sharp-edged axes.”32 Here, Mike’s Earthship drew from this American trope of dwelling and labor to live with the land rather than destroy it.

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For Angie, building an Earthship was brutal, backbreaking work that, several decades later, she describes as “outrageously incredible.” For three years, she mixed earthen cob and plaster by hand, throwing it against the walls of her home. By the third year, her shoulder “was so totally fucked up” that she felt like she “could have pitched for the damn Reds and made money.” She cornered Benjamin, telling him, “If you don’t
come and help me get to the end, we’ll never ‘gunna be able to live here.’” Benjamin told her to hire some help, get some teenagers to help on the weekends. The next summer, Angie paid two teenage boys to help pound tires.

“Thank God that was 20 years ago and not today. I wouldn’t have it in me,” Angie tells me as we discuss the build. Building a house gave her confidence and kept her in shape, but it was a struggle. For starters, Angie felt like it was hard to come by honest work seeing as, in her words, “the work ethic ‘round here can be very difficult.” In Angie’s estimation, the pills, coal strikes, and booze had long taken their toll. There was a reason the roads had names like Poverty Ridge.

The fact that Angie was looking to run the crew as woman (and a liberal at that) made it even harder. It didn’t matter that she had grown up less than an hour away; it didn’t matter that she had worked as a foreman, taking apart barns for scrap and salvage. She wasn’t from Philo. She wasn’t from Moxahalla neither. She wasn’t one of them.

She could feed them though, and they respected that. Food was how she first bonded with the boys. They’d bring the worst food imaginable and she’d scold them. But she was careful to chide in a maternal, loving way. At the end of each building season, before it got too cold, she’d host a party where she promised to make anything they wanted, but “a lot of times they just wanted to have a wiener roast.” But sometimes, if she had enough money, Angie took them to a restaurant in Zanesville, somewhere they’d never been before to celebrate. Afterwards, they’d bring their families to the build site to show everyone how to pound tires or mix cob.
Although Angie couldn’t pay much, she was always sure to pay on time. She was relentless, because, according to her, a good check “was proof of honesty with these men.” Every Friday, she’d settle up, but one Saturday morning she received a call from one of the workers. He was at the bank and the check hadn’t cleared. Angie was besides herself. Throwing on her jacket, she told him to stay put—she’d be on her way to sort the mess out.

When Angie arrived, the workers were in the parking lot. Inside, the teller explained that the funds hadn’t cleared yet and the bank wouldn’t loan on credit. “Well how much do I have in my account?” Angie asked. “That’s not the problem,” the teller told her, “you’ve got enough money, but it’s all in savings.” So, she had the money, but the teller hadn’t felt comfortable cashing the checks—who was to say that they hadn’t got a hold of her checkbook and wrote some phony checks for a quick payout? The teller apologized for the error, but with the men standing behind her, Angie felt like she had to give it to the teller: “Don’t tell me you’re sorry. Tell those men standing right there, because they thought I’d screwed them. If you can’t apologize, cash me out, ‘cause I’m not banking here anymore.”

In the parking lot afterwards, one of the guys told Angie that they all knew she was “good for it.” When she asked why, he said “’Cause you drive a real impressive vehicle.” Angie didn’t think the SUV was anything special, but then again it was nicer than any of the trucks she’d seen them drive. “You’d be amazed,” Angie told me later, “how many men came to work for me because they thought I could pay them because I had a nicer vehicle.”
So, it was touch and go for a bit. Concessions were necessary—it was her home, but she wasn’t building it alone anymore. The guys were bigger, stronger, and some had more construction experience, and Angie learned to work with them. There were a lot of problems with the build; the architectural blue-prints Angie bought from Mike were littered with errors. But when they encountered a problem, she’d tell ‘em, “Okay we’re stuck here,” and everyone had an equal say. At the end of the day if the problem hadn’t been solved, she’d send everyone home with the plans, telling them, “Look when I ask you what you think, don’t give me bullshit.” They respected that she wasn’t a pushover, and Angie and learned how to build a home with her community.

There is a power in working together with your hands. It’s a way of knowing others absent in talk—no matter how dialogic it claims to be. On the jobsite, you may swap stories, but more importantly you sweat and bleed together. Manual labor is a great equalizer, and as individual rhythms harmonize by the swing hammer, hoe, or pickaxe, melodies of the laboring body are born. It’s a melody found in the bravado of sea shanties, the lessons and stories contained in mining ballads, and the call-and-response of agricultural songs:

Steel drivin’ soon in da morning
Steel drivin’ right inn’a noon day
We steel driving all the day long
Why don’t ya pull it back ‘n strike it head on
Why don’t ya pull it back ‘n strike it heavy boys
Why don’t ya’ pull it back ‘n strike it heavy son
Work songs represent a near-perfect union of body, rhythm, and will. Maybe that’s why Angie was so particular about the music. After two men left the job, she had trouble finding workers until the steel plant in Zanesville went on strike. The first day with the new boys, she found out that they all loved metal, specifically a band named Korn. “Okay here’s the deal,” she told them, “I don’t know what they’re saying, but the energy of that music is really, totally shit. This is a house. People are ‘gonna live here. You can’t put evil, negative, violent energy into the wall. I mean, you can’t do it.” They laughed at her, but she was persistent. After one of the men told her he liked country, she drove to the library the next day and picked out 10 country and western CDs. Together they spent the rest of the summer, listening to the twang of a pedal steel guitar and the lonesome ballads of Waylon Jennings, Hank Williams, Merle Haggard, and the coal miner’s daughter herself Loretta Lynn,

The first thing I remember knowing,

Was a lonesome whistle blowing,

And a young un's dream of growing up to ride,

On a freight train leaving town,

Not knowing where I'm bound,

No-one could change my mind but Mama tried.34

She might not be their momma, but she tried. They were all good guys in Angie’s eyes, “save for that one who was hell-bent on joining the military, he was a jerk.” They knew how to push her buttons though, and sometimes she felt like the conversation turned to politics, women, and guns just to piss her off.
But she never told them to shut up. Instead, she fished out an old Mason jar. If you were going to throw cob or pound tires with Angie, you couldn’t be sexist or bigoted on the job. As Angie remembers,

And they would do the most obnoxious things. So, these are good memories in a way, because I would say, alright, you can’t be sexist and work with me. You can’t throw cob with me or pound tires or whatever if you’re ‘gunna be sexist, ‘cause you’re putting all that horrible hateful bigoted energy into that house. You can’t do it. So, every time they would start, I would say, “Alright, we got a jar. What’s the topic for the day?” And so, every time they would start to gossip or be bigoted or sexist, I would say whatever the topic was for the day.

Those were the rules; there would be no hateful energy in the home. Anyone who cussed or said something ignorant had to put money in the jar. The money went to a bonfire, and, by the end, they’d call each other out on the job, and even Angie found herself tipping the jar.

If work became tedious, Angie would sometimes push them, asking questions like, “would you mind if your girlfriend earned more than you?” In turn, the men began to talk openly about politics, and she’d sometimes tease them saying, “you know you’re turning into a downright feminist now.” It was a proud moment for Angie—she’d worked as a domestic abuse counselor after graduating from college (in her mid-forties) and for so long she felt like she was “spinning her wheels.” This was different. She never imagined that she’d debate feminism and patriarchy over sledgehammers. As she told me during our interview, “those are the really good memories of the fact that this building
changed people’s lives.” The Earthship gave Angie a chance to continue work as an advocate with her home as the conduit. When she’d throw parties, some of the women would tell her, “I don’t know what you do over there, but he’s not getting drunk when he comes home at night.” Home has a way of changing habits, even in passing.

Final Thoughts on Deep Ecology and Trans-Generational Activism

Earthship living is sensitive to change in an ecosystem over time. In a home built from refuse, you learn to appreciate entropy in a system. By composting your own manure, collecting your own rainwater, and raising your own food you implicitly acknowledge that decay provides the conditions for new life. What is more, since it takes time to ferment food, make compost, or chop wood, you learn to put a hat on when it gets cold and savor the little things. The very design of the Earthship requires that you pay attention to your surroundings. For participants like Angie, the Earthship is daily reminder to dwell with others,

I mean you have this awareness of how much fuel you’re using for the wood, and how to use different part of the building at different times of the year and I think the house really contributes to this. . . . Like just as we are sitting here there’s been a swallow that’s feeding there because we have these twigs shoved into the raised beds so she will come there and land and eat bugs from the ground.

Angie’s home—and the habits she’s learned over her life to keep this house a home—help her untangle the complexities of labor, consumption, and commodity. Commodities are made to be used, discarded, scrapped, and bought again. They have underlying logics of circulation that as Elizabeth Chin writes, “connect [us] at once outward to the world,
and inward to [our] being.”35 In an Earthship though, you think less about commodity and more about circulation. This is, in part, what makes the hand-built home attractive to so many environmental activists who wish to change how we consume commodities of home.

In Muskingum County, OH, Angie lives at the epicenter of what it means to live in a post-coal economy. The nearby land, some 100,000 acres of it, has been stripped-mined by machines so large they have their own nicknames and press releases. So, it’s not surprising then that Angie’s stories of home are also stories about the land itself. As an environmental activist, Angie connects the ecological footprint of her Earthship to her granddaughter’s future,

Let’s say our granddaughter, years from now when we’re dead and gone and not influencing her thinking, and she says, “I don’t want that building there anymore. I want a different building there because the infrastructure’s there, and I can just use the cisterns or whatever.” Every bit of that is either repurposed or reused or composted. Every bit of it. So, there could be nothing there, but it didn’t take anything away from the future, and that’s the goal. So, everyday life is planned in a way, “How can we not take away from the future? How do we support all the things around us?” Because we’re responsible for supporting those things, not just the building, ‘cause we say it has value.

Participants like Angie embrace Deep Ecology to cultivate daily habits of mindful consumption as a kind of trans-generational activism for all species, their kin included. In Angie’s case, she’s designed a “thanks for nothing season” during the winter where the
family does not buy any products or consume electricity produced by coal-fired power plants,

We have one month a year that we don’t use grid energy. We call it, “Thanks for Nothing Month.” We actually call it a season now ‘cause we go four months without shopping but we also have 31 days in January that we don’t use grid electricity. No commercially generated energy for anything, and so everything happens on the wood stove. Or solar. We can still use the solar oven in the window and things like that, but to me it’s like I have homeland security.

Whatever goes on I’m good as long as the roof doesn't blow off.

Performances, such as “thanks for nothing season,” meld architecture and daily habit in the service of a Deep Ecology. It is a union that allows Angie to exert agency through domestic habit to disrupt modern rhythms of energy production, which she sees as harmful to the life and eco-system of the Ohio River Valley.

Laura, Rob, Sasha, and Angie—through habit—speak to home as a Deep Ecology of material, affective, and biological forces wrought over millennia. Here, commodities of home—whether they be a toy train, old salsa jar, or tire wall—are, to quote Latour, “actants,” in that they “modify other actors through a series of actions.” Following the work of scholars—such as Timothy Burke and Christiania Miller—who trace the use of domestic commodities, including butter, a bar of soap or fresh cut flowers, within larger political ecologies—I interpret home as a material ecology as we structure a world around us through domestic habit. In this way, material ecology moves beyond the nature of an object’s “thingness” to examine the effects on other actants.
is an articulation of home that implicitly extends domesticity beyond domination within the *oikos* to consider the impact of dwelling within the Anthropocene. Home, after all, is a Deep Ecology
Water, Dirt, and Emergent Rhythms of Affect

Emergent Rhythms

Last week I lost my muffler on Sweet Hollow road sustaining a rhythm I’ve chased ever since I first picked up a hammer. Rough carpentry is tripartite rhythm: The framer is the most experienced builder. He is responsible for measuring each timber. He stays on the build, relaying dimensions to a cutman who operates the saw. Rather than break the cadence of this call and response, most crews rely on a runner to ferry lumber across the build and help with installation. The runner is the least experienced carpenter, the type of person who doesn’t add fractions quick enough, can’t remove a speed square from their tool belt without looking, and binds the circular saw in anything thicker than a 2X4.

When I work with John or Danny I am always the runner. Community builds, however, lack a pecking order, and as a result, the way you stage scaffolding or the tools you carry can ruffle a few feathers. If ego or personality are involved, it gets messy—as in the case of a tiny home builder I interviewed who had many fancy tools, a half-dozen volunteers shifting restlessly in the mid-day sun, and an amazingly byzantine method for deciding where to set each post for the deck we were to install. It’s the thing I hate most about fieldwork, and dust ups usually occur once dehydration sets in. In the wilting Ohio heat, a water jug goes a long way, and I always carry extras with me—one for myself, and one for when tensions run high. The whole ordeal reminds me of the way dogs preen and posture over a water bowl when they know someone’s watching.
Building (of any sort) can be an awkward, fragile space. There are times when the last thing you want to do is take notes. Although clichéd, studying how rhythms of a build emerge through daily habit requires that you “go with the flow.” Once I realized this emergent property of fieldwork, I took fewer written notes, and began narrating the day’s events, in private, on the drive home.

Note-taking-while-driving works best when I find a well-paved shoulder or rare straightaway. Sweet Hollow, however, is a gravel access road strung between pine-studded ridges. As I’m shifting gears while reaching for my recorder, I don’t see the rust-flaked Farmall tractor sputtering down the hillcrest in front of me. I avoid a crash, but by the time I coax my truck from the bar ditch (an engineered ditch system found on either side of most unpaved roads), it’s missing a muffler, and I’ve lost the ability to enter a field undetected.

Losing a muffler changes my habits of fieldwork and it causes me to think about home as a place of emergent rhythm. Drawing from Henri Lefebvre’s pronouncement that time is “a history of rhythms,” I consider home as cyclical cadences of growth and decay that, in turn, cultivate domestic habits.¹ Cadences are underlying ecological cycles of matter so fundamental to being that they ground the conditions for all organic life.

As rhythms coalesce along underlying cadences within a material ecology they lead to established patterns of domestic circulation that I refer to as a petrification. Petrified rhythms represent domestic actions (e.g., shoveling and tamping dirt, turning on the radio, or drawing a pot of water) that found dwelling as an everyday habit. Although quotidian, events like losing a muffler alter the rhythm of everyday life to attune you to
formerly invisible habits and ecological rhythms. In my case, I no longer take fieldnotes on the road, so I begin paying attention to local ecologies, and I notice vibrant matter. Particularly, I notice water and dirt.

As a complement to affect theorists, notably Kathleen Stewart and Sara Ahmed who catalogue the generative, emergent potential of everyday objects, this chapter explains how vibrant matter circulates within the Ohio River Valley according to cadences of petrification, exposure, and growth/decay. As a result, I’ve written four stories steeped in a thematic of “dirt and water” to show why my participants build with vernacular techniques in a new form of community-centered activism. At the same time, this chapter serves as a reminder that rhythms of domestic consumption—as rhizomes—may spur life-altering trajectories.

A River of Earth and Petrified Affects

Of all matter, water and dirt are among the most essential. During the Pleistocene Epoch (11,700-2,588,000 million years ago) frozen water spread southward from the Great Lakes through mile-thick *Wisconsian*, *Illinoian*, and *pre-Illinoian* glaciers. Underneath these creaking leviathans, ice-etched grooves, like the 400-foot striations left at Kelly’s Island, scraped nutrient-rich soil into Ohio River Valley. This “River of Earth”—to quote Appalachian author James Still—birthed not only the corn and soybean belts of the Midwest, but also the clay-laden hills and hollers of southeast Ohio. The farm I grew up on lay on the outskirts of the glacier’s reach. The hillside my father drove us down on the way to school took its name from the manufacturing hamlet of Moraine—the geological term for a ridge created by glacial ice.
Beginning in the mid-19th century, towns along the Hocking River in southern Ohio began producing bricks from soil churned during the Pleistocene. According to Edward Orton’s 1884 geological survey, during brick’s heyday, the towns of Nelsonville, Buchtel, and Glouster built octagonal-domed kilns, each of which, consumed 80 acres of
timber per year. For the first time in modern American history, building materials were captured, chemically converted, and consumed in a matter of hours.

In Ohio, this chance mixing of water and dirt paved the way for the brick-clad federalist revival of the late 19th century. Swept away in this tide of industrialization, though, masonry construction left vernacular earthen techniques, such as pisé de terre (trans. “rammed earth”) and cob, behind. So today, when I see an Ohio brick repurposed as a door stop, or set into a cob wall, I think about the haphazard travel of matter within an extraction economy. When you think about it, it’s a rhythm of production equally as random as it is unsustainable. At the end of the Pleistocene, clay was scrubbed south by vast sheets of ice. More than two million years later it was exhumed, baked, and transported across America via river, canal, and the B&O railroad company.

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Eighty years after the Athens Brick, Co. closed in 1920, Rachel and Alex broke ground on a barren ridge just north of the sleepy river town of Pomeroy, OH. The property had been in Rachel’s family for generations, but Alex was an outsider. Alex grew up along the craggy coastlines of Big Sur California. What struck him most about Ohio was the humidity. In the stifling summer heat, Alex’s clothes clung heavy and hateful to his body like a wet burlap feed sack. And then there was the ball lightning, which he says clumped together in “charged plasma balls that would just drift through the house like ghosts.” After moving here, Alex decided that Ohio was not drought country.

As a native daughter, Rachel knows about spring in Ohio. She’s seen the way red maple leaves flutter before a storm, curling towards the sky to welcome rain. And how
sometimes storms get trapped between the hills, pouring rain and fog into the hollers for
days on end. Building a stick-framed house would run into spring, and Rachel couldn’t
see herself dragging muddy 2x4s around in the slop as Alex struggled to brace walls in
the driving rain.

Rachel and Alex needed a quick, cheap, sustainable construction method. At first,
straw bales seemed like a good fit. But then Rachel remembered how straw and water
mix. She’s seen firsthand how fast mold spreads through a stack, “We’ve been around a
lot of hay bales and they can go bad, so mold and anything like that just scared the shit
out of me with straw bales.” The more she thought about it the less Rachel liked the idea
of a straw home. The Laura Ingalls Wilder shtick was one thing, but in Ohio she knew
that eventually straw and water would mix, and when it did, mold would follow.

With no real construction experience to speak of, Rachel and Alex followed the
simplest path—like water, the path of least resistance. They followed in the footsteps of
those who built The Great Mosque of Djenne, the Great Wall and Hakka dwellings in
China, and, closer to home, the earthen palisades and thatched homes of the Fort Ancient
civilizations. Rachel and Alex built with dirt.

In their chapter on vernacular building materials, authors Al Fritish and Paul
Gallimore describe the benefits of rammed earth as a sustainable technique for
Appalachia:

Rammed earth advocates speak of their structures blending well into the
surrounding landscape, being sound and fireproof, having reduced risks from
earthquakes and wind damage, causing fewer health problems induced by poor
indoor environments, and having lower lifetime operating costs for maintenance and energy use.

With rammed earth, there are no worries about what’s growing inside the walls of your house. As Alex tells me, if you test the mixture before building, you can also rule out formaldehyde, perfluorooctanoic acid (C8), or arsenic contamination. Moreover, since building materials are excavated on site, rammed earth requires modest building supplies; you can get started with as little as two 4’x10’ plywood sheets, a tamping stick, and a set of adjustable “pony” clamps to hold each form together.

Figure 23: The view from Rachel and Alex’s kitchen. Meigs, Co., OH. Author image.

Rammed earth construction provides homeowners a way to dwell in nature (rather than outside it). To build a home, soil is excavated, mixed with binding agents—
including water, gravel, lye, and (in some instances) blood—and finally compressed until the mixture petrifies. During our interview, Alex describes why he felt this vernacular method adapted well to southeast Ohio’s climate and soil:

Yeah, you got stuff that’s been lived in for, I think some of them are 1,000 years old, they’ve been rebuilt and rebuilt, but there was no outstanding issue that this climate proposed, and the classic foundation, which is a rubble trench which is what we used here, works really well in these very expansive soils, because it basically floats on top of clay that’s [moving] all season, forever.

As Alex notes, in Ohio, nothing—not even the petrified walls of a rammed earth home—is stable. Terrestrial movement follows the freeze and thaw of soil as winter gives way to

Figure 24: Rammed earth garden wall. Meigs, Co., OH. Author image.
spring. Rather than fight this ecological cadence of expansion/contraction, vernacular builders design homes that mimic organic rhythms to minimize the material impact of dwelling. For Rachel and Alex, building with rammed earth on a floating *rubble-trench foundation* just made sense—if earth moved, the house would adjust. There was no need for engineered concrete with rebar to brace home against outside forces. The most sustainable option was to simply “go with the flow.”

Figure 25: Rammed earth wall on the southeast side of Alex and Rachel’s home. Meigs Co., Ohio. Author image.
In their dance with time, homes resist decay as they adapt to domestic rhythms and habits in a new era. In this way, architectural history maps a circulation of habits, customs, and building practices within a material ecology over time. After contact with Greek architects around 600 BC, for instance, Etruscan builders incorporated wooden pediments and other classical features into their temple design. Three hundred years later, these vernacular techniques were absorbed by the Roman Empire after legionnaires sacked the Etruscan town of Vali. When Vali fell in 396 BC, Roman architects began retrofitting Greco-Etruscan timber-framing with stone in a process that historians today refer to as petrification.

Figure 26: Traditional rammed earth construction. 1904.

As archeologists Paulo Charruadas and Phillippe Sosnowska argue, petrification illustrates how architecture evolves to reflect local politics, building materials, and climate as structures are repaired, added to, or replaced. In this way, petrified dwellings
represent a kind of thought experiment akin to Plutarch’s Ship of Theseus: If a house is replaced piece-by-piece over time, is it the same home?10

Figure 27: Tripartite rhythms of petrification. New Marshfield, OH. Author image.
Vernacular dwellings enact petrification on both material and cultural grounds as compound structures emerge over time through gradual change. But vernacular building practices do not cheat decay; over time houses become extinct, forgotten, or replaced. As a result, unlike modern building materials, which cling to permanence through chemical alteration, rammed earth builders recognize decomposition as a natural part of
homebuilding. Petrification may slow decomposition, but erosion is inevitable—water will always find its way inside. It is a cadence, like the inching progress of a glacier, etched through timeless ecological rhythms. By the very nature of the building, you must exhume dirt to acknowledge decay as a valuable catalyst. Dirt to dirt. No organic home is eternal.

Organic material—unlike the C8 particles suspended in the water supply of Meigs Co. where Alex and Rachel live—decays. Domestic matter decomposes in ways that I used to think of as an affective Form/Content distinction. I have since changed my mind; sometimes relations between vibrant matter shift in ways that trouble a stable sense of Form/Content. Within this material ecology you learn to attune to the vibrancy of everyday “happenings” (as Sara Ahmed terms them) that alter relations between matter.

There are moments when affects shift. The day I interviewed Rachel and Alex, summer again slipped back into spring. Ohio hadn’t seen rain for weeks, prompting me to note this seasonal cadence in a field note recorded while driving, “Still green, still verdant but the outermost edges of the leaves give way to heat, turning brown. Summer has arrived.” On the way to Rachel and Alex’s though, a heat-induced thunderstorm crops up and I’m overwhelmed by something I can’t quite articulate. After I realize that this is the first time I haven’t heard cicadas since May, I pull to the side of the road take a couple grainy photographs and record the following field note,

Cicadas but you can’t hear them. It’s weird not hearing the them. Bruised sky.

Dark greens, purples, swollen fat with rain. Thick raindrops hit my windshield.

Round grain silo cut in half, horses peeking out from shelter. Lighting touched down. Horse that was struck as a kid. Round bales. Red clay eddies. The storm was close; I could feel metallic taste on my tongue. The same taste as when we were kids bailing hay or playing out in the field during summer heat storms.

Figure 29: Impending storm. Author image.
Because I chose to wax poetic about trailers, chickens, and grain silos, I was late to the interview. But the storm awoke something in me—something that I would not have noticed if I lacked a muffler: Although rhythms of being may appear deafening, they pale in comparison to the ecological cadence of matter. Water and dirt are elemental and even primeval rhythms—like a 17-year brood of cicadas—yield to a thunderstorm.

Later, as I listen to Rachel and Alex explain how to build rammed earth with plywood forms, I begin to piece together a new theory of object-affective relations. In large part, this was due to Rachel’s use of the phrase “instant sandstone” to describe to processes of making rammed earth:

Alex: So, these forms [pointing to sheets of plywood bound by pony clamps] -- And you reuse the forms for the whole place, so you only need one or two sets of forms.

Sean: And then you just move it down [the wall]?

Alex: And you move them. So, the corners go up first, and they’re monolithic, these big things here. So, you dump your—you mix your stuff on a pad, you mix. We use river run out of the Hocking River. Those piles that you see down there, that people poured, that’s the best stuff. And then you mix it with Portland cement with a rotor tiller, and put a little bit of water in it. And then we use the skid loader to lift it up, you shovel it in, you pile about a foot at a time, and then you tamp it with this pneumatic tamper here. And then immediately when you’re done, when you hit the top, you pull the form off. So that’s a corner. Pretty cool.

Rachel: It’s done. It’s instant sandstone.
Stone, even sandstone, seems so permanent. But, like all instances of petrification, it cannot resist water borne cadences indefinitely—erosion will happen. After the interview, Alex showed me water damage along the dirt walls. “I would have extended the roofline,” he tells me. He talks about his home having a “hat” and “boots,” but I don’t understand what he’s saying. “It’s all about water,” he tells me. After our interview, I take the long way home on Possum Hollow where I record the following:

It’s not raining anymore. Pleasant interview. Alex reminded me of Grandperé. Thunderstorm gives way to a sepia sunset. Burnt amber. Describe property. Describe house on the property. Areo trailers covered by tarps. Chicken wire. Trucks. Knocked on the door, no answer. In driveway, there is a catamaran and a yellow skidsteer. Why the boat? No water. The house is two gable structures butting up against each other. Wooden deck unconnected from the house that looks over gentle rolling pasture. Hammock between two young growth oak. Bead and batten siding. Stained, either cedar or poplar. Green roof. (check?)

Driving. So many creeks. Paint Creek, Big Fork Paint Creek, Little Raccoon Creek, Raccoon Creek, Sunday Creek, Monday Creek. Causeways and byways. Whole systems of transit long forgotten. Talk about water utility companies and Rachel and Alex’s insistence to use a cistern.

Some landscapes are built for certain times of the year. For the majority of the year, the landscapes gestates. Waiting. To open up at its beauty. Giant’s causeway isn’t Giant’s causeway without the rain and slick rocks. Ireland isn’t Ireland without spring rains. Like the VS Naipaul story (find it) where the
narrator—an emigre from Trinidad can’t make out the landscapes of the English coast until it snows. Or the snow, “faintly falling,” and Joyce. I’m sure, although it is fiction, that Joyce himself felt this one night walking by a black wrought iron fence accumulating snow. Climate dictates architecture design, and by extension, dwelling. What is Appalachia’s season?

Many of my participants talk about home as an organism or being. And beings have phenomenologies. They have rhythms. They have affects and atmospheres. Talk about Alex and Rachel’s house—a house sitting alone on a ridge. The drives. Living “far out” to avoid code. The importance of code and standardization—Lefebvre. Rammed Earth as an alternative. Someone commented on Alex’s home. “Home is where the tools are.”

I accidentally left the tape on. Whoops. Nabokov. Lepidopterist. The similarity of ethnography and writing. The compulsion to capture sense. To organize it, even if in the most sporadic of ways. Alex tells me that anywhere outside is the bathroom.

Vernacular construction—as an object of study—transcends Form and Content. With the right mixture, you take naturally occurring substances and transform them into something completely new with a lot of dirt and a little pressure. Sometimes the occasional stick, river mollusk, or rock slips in and unanticipated rhizomes emerge as pressure redirects earth along paths of least resistance. So, I recognize rammed earth to be an emergent property of vernacular dwelling generated through tangled acts of domestic labor that chafe at the idea of objects as affective things-in-themselves, which can be explained
away in a deterministic or linear manner. With vernacular dwelling there is neither Form nor Content, just being. You can’t explain what it means to build a rammed-earth home by describing it in terms of analytic propositions: i.e., “that it is ‘hard,’” “cool to the touch,” “30 percent river-run gravel,” “rocklike,” “petrified,” “sustainable,” etc. Rammed earth, like most vernacular techniques, cultivates a being-in-the-world that, according to Alex, “[makes] you more in tune with the land.”

Figure 30: Rammed earth rhizome. Meigs, Co. Author image.

If Descartes’ had picked up a hammer rather than wax, perhaps his *First Meditations on Philosophy* would have anticipated Heidegger’s critique regarding the
temporality of being. And maybe if Heidegger had swung a hammer (rather than write about it), he would have realized that home is so much more than wunian—a safeguarding of ego. In fact, building home often has an opposite effect—it maps dwelling as a series of unintended transactions that ripple through time. Here, “Form” and “Content” mean nothing.

Petrification, as a cyclical process of compression/decompression, illustrates the ecological complexities of home. As a result, I interpret stories of vernacular petrification as rhythmic rhizomes of cadence that illustrate a vast multitude of quantum indeterminacies that, bound together by the universal conditions of time and space, disrupt dwelling as a linear, causal process.\textsuperscript{14} It’s a rhythmic attunement to home that echoes archeologist Sophie Hueglin’s call to study cross-generational rhythms of building:

“Petrification” can be understood as a process of consolidation whose effect is to make something more permanent, trans-generational, or even eternal. This can be a process in nature or culture, in space, or in time. We associate “petrification” with stability and security as well as with regular structures and rhythms.\textsuperscript{15} Petrification brings stability through daily rituals of labor, consumption, and culture circulating within home. But petrification also locates dwelling within a vast material ecology of history, climate, and resource where nothing is eternal and everything decays. As a result, petrification serves as a reminder that while building may be measured in years or months, the conditions that make this home possible belong, like the Pleistocene, to Deep Time.
Rhythms of petrification influence how we dwell in a material ecology. As a cadence, however, petrification is also the study of how some things get “stuck” though time. As a building material, rammed earth gets stuck through underlying cadences of compression and erosion. But as a rhythm, vernacular petrification also influences daily habits of home. In a home with thick earthen walls, which hold heat or cold, you attune to the sun’s path solar over the year and learn to the habits of when and where to open windows or throw another log in the woodstove. As a result, petrified habits—say splitting firewood, gardening, canning, and hunting, enact vernacular rhythms too often forgotten in the Anthropocene. Here, everyday matter like water or dirt, becomes vibrant as homebuilders realize everyday habits as a domestic ecology of conservation.

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In place of metaphysical theories of home that reach beyond the physical world, cycles of petrification/decay ground dwelling in a material flow of resources through an ecosystem. But petrification of dirt is just one emergent rhythm of home. At the end of the Pleistocene, as global temperatures rose, melting ice spawned a dense network of waterways throughout the Ohio River Valley. As the Ohio Division of Geological Survey notes in its 2008 report,

These bodies of surface water, as well as abundant supplies of ground water stored in some glacial sediments, provide a nearly limitless supply of this vital commodity for both domestic and industrial use. For example, ground water obtained from sand and gravel deposits accounts for more than 80% of the water used for high volume industrial and municipal water wells.¹⁶
Ohio is awash in water. By volume, the Ohio River is the single largest tributary for the mighty Mississippi. But in 2010 alone, industrial plants released over 32 million tons of pollutants along Ohio, and, as a result, for the past three years the river has earned the dubious title of “America’s Most Polluted Waterway.”¹⁷ This is, in large part, because toxic matter—like the 3.5 million lbs. of manganese released into the Muskingum River by Eramet Marietta Inc. in 2008—flows downriver from tributaries further upstream.¹⁸ In total, the Ohio River Valley and Great Lakes region account for more than 20 percent of Earth’s surface fresh water, yet today this water is under threat of contamination from heavy manufacturing, agricultural runoff, and nitrogen-based fertilizers. It shouldn’t come as a surprise then that homebuilders I met discussed how water politics shapes daily rhythm on their homesteads.

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Rachel and Alex built their home with materials from southeast Ohio. The maple and ash flooring on the first floor was milled at a sawmill “down the road, a couple of miles away.” The walls were formed from local river-run gravel, and the windows bought used from a now-defunct manufacturer in Malta, OH. And after I helped install a solar system on their property, Rachel and Alex now harvest electricity from the sun. In a classically Lockean sense, their labor removes local matter from a state of nature to create home.¹⁹ But, rather than frame dwelling as a private space of safeguarding, Rachel and Alex locate their home within a larger “tragedy of the commons” spawned by America’s mindless consumption of vibrant matter (such as coal, lumber, brick, passenger pigeons, Teflon, or the atmosphere) with little regard to how these habits
negatively impact life elsewhere. In contrast, their labor is not one of dominion, and they build as a reminder that domesticity implicates everyone. For this reason, Rachel and Alex are careful about how they consume water and dirt.

Rachel and Alex define their home, in part, as a commitment to sustainable performances of dwelling, and they follow the natural rhythms of growth and decay to build their home. For example, the couple notes, “We did ash [as a flooring material], ‘cause the ashes were going away [from the emerald ash borer]. We figured this was a good time to get them and use ‘em.” As an architectural extension of this belief, Rachel and Alex also utilize rain water entrapment through pond irrigation and a 2,400-gallon cistern. This habit of conservation is motivated by the couple’s mistrust of local water utilities that have disrupted historical dwelling practices in the Ohio River Valley. As Alex explains,

The local water district is kind of a dominant force in the area and they kinda dictate things. Any construction is dictated by zoning and a permit process. So if you roll back, like this [property] is part of a farm that—there’s an old farm house straight across that we own that’s part of the farm, 1804, so if you go way back, you had to have a certain amount of land in order to make things work. And part of the thing that you needed was water, so all the old farms had cistern systems, they collected everything from the house, the barns and so you wouldn’t have farms very close together, because you had to have your animal space, and your water space, and make everything work. So, the water utility acts as a de facto developer, the city water system, so any place they go now you can subdivide
down to whatever the minimum is. There’s nothing to inhibit it because you’ve got the water.

Rachel and Alex chose off-grid water storage as a moral, political statement about domestic consumption. In this manner, their daily performance of home resonates with other participants who believe that water is sacred matter. John, for instance refuses to install a flush toilet at his house because, “the idea of all the chemicals and energy that goes into me taking a crap in five gallons of water offends me.” As John explains,

[T]he composting toilet I think is a pain in the butt, but [it’s a question of] do you look at it as a sacrifice? Are you making that sacrifice consciously—100%. I mean I empty that; I handle that. Most Americans do not want that [i.e., to use a composting toilet]—hear my words— [they’ll say] “how does someone deal with this! I’ve been shitting in water my whole life and it just goes away!” I like the idea [of the composting toilet], and I’ve told my children forever that nothing goes away. That [excrement] doesn’t go away, ours is here in this pile, you know where it is. Next week you see it again [when you empty the toilet]. I’ve had homeschool-group kids out here where I had a bucket of our compost from our human manure and a bucket of compost from our compost pile. I didn’t have them putting their hands in it, but I could have. I did and I showed them, “which one is which?” You know? They couldn’t tell but the human manure was just more beautiful. So, gorgeous. Rich and dark. But fine loam. Not offensive in any way. It didn’t smell bad. So yeah, it’s definitely political man.
Likewise, Lisa, a local watershed coordinator, voiced a similar “moral opposition” to waste water, while noting that, “Flush toilets [are]—I don’t know, like crack or Lay’s potato chips or something. Once you have it—there’s no going back.” In Lisa’s case, however, she also acknowledges that her family’s off-grid lifestyle is far from the American norm,

Lisa: The rainwater [entrapment] flips people out, too. Jacob again, grew up with an outhouse [on a nearby farm]. Like, his family, it’s not unusual for them. It was more my family that was kind of weirded out by the bucket.
Jacob: Yeah, I think the drinking water is a big thing. And yeah, I think that’s a major difference between living in an [off-grid] house like this and a standard house. It’s like most people are used to just turning on the tap and the water’s there. And it’s not like that here, and there can be all kinds of things beyond just running out of water, that could happen. There’s a whole system from the pump and the filters and you ‘gotta keep all the parts in good condition. And then the heating, again, it’s a similar theme to the general theme of feeling like there are good things about it and bad things about it. Like the investment gives you rewards, but it’s also extra work.
Lisa: Right, yeah. It’s true. Well, at one time, we were at a Christmas party, and there was a Health Department guy. Health Department folks here are used to the rainwater [collection]. There’s a lot of folks that use rainwater—and, they have their recommendations, if you collect rainwater—but he’s not, vehemently against it. But we met this young guy who is the new head of the Health Department in
another county, and I think his jaw hit the table when Jacob described—and he might have even used the word “child abuse” or something.

Jacob: Yeah, he said, “You’re endangering your children.”

Building a home that sources its own water, allows eco-homebuilders to disrupt habits of consumption they deem wasteful. In contrast to an “on-demand” model of consumerism, off-grid living requires careful thought about when and where to use a resource. For Lisa and Jacob, this means cultivating a sense of home that balances dwelling with seasonal cadences within an ecosystem:

Jacob: We collect rainwater, that’s our water supply, and so keeping an eye on that. And in the summer, when there’s a lot of pollen, sometimes will shock our system with a little chlorine or whatever. And we’re not very scientific about it. It’s just like, “Does it smell funky?”

Lisa: But keeping an eye on it and keeping an eye on the level [is also important]. We just have one 1,500 or 1,700-gallon, I think, tank. It’s a typical septic tank. Well, there’s four people that live in this house, and we’re not extreme showerers, but we probably shower, each of us, at least two times a week. And we do laundry, and we have a flush toilet and all those sorts of things. But we rarely have to fill that tank. Every now and then, we probably, eight times in the 12 years we’ve lived here, maybe a little bit more.

Jacob: It’s been a few years, we’ve had a lot of rain. A few years ago, there was a couple dry years. One time it was dry in the summer and we got it [water from town], and one time it was dry in the winter, or maybe extra cold in the winter and
so the snow wasn’t melting fast enough or something. But it’s been a few years since we’ve had to buy water. But that’s one [habit], keeping an eye on the water and thinking about it. Keeping an eye on the moisture. Because we have earth plaster, I would say once a year, there’s somewhere where you’re repairing plaster. Initially, when the house, up near the roof, started settling, we had a period where we realized that there were some flying squirrels getting in and we realized that there were some gaps opening up, up there, and we had to do some work up near where the roof was.

Lisa: It’s just like changing your habits. I don’t bake much bread in the summer ‘cause I don't want to heat the house up. That’s more of a winter time thing or there’s certain things that you just do or don’t do, depending on what season it is.

Like Alex and Rachel, Lisa and Jacob perform home with vernacular techniques to minimize their ecological footprint. The rhythms of their homestead follow organic, seasonal cadences dictating when they bake bread, chop wood for fuel, or harvest water. It is an approach to environmentalism that is mindful of the widespread contamination of organic matter within the Ohio River Valley and treats non-human matter with the utmost respect. As a result, their homes harness natural topography and climate to conserve resources. But sometimes, this history is hidden, so you don’t find out about it until years later. This next story traces one such occurrence within a material ecology of the chemical sublime.
Figure 31: “Waste makes wealth.” Composting toilet. Philo, OH. Author image.

Monkeywrenching along the Ohio

Writing in his 2016 essay on formaldehyde exposure in prefabricated housing, Nicholas Shapiro posits the idea of a “chemical sublime,” wherein “affected processes of attending to the minute aberrations of the body and atmosphere are the primary means of discerning protracted and low-level encounters with domestic chemicals.” It is a process of daily being-in-contamination that, according to Shapiro, “emerges from late industrial material ecologies” to “stir ethical consideration and potential intervention [through] the articulation of small corrosive happenings that [force] residents [to] reckon with how their homes are decomposing into them as they decompose in their homes.” In this space, dwelling traces an affective stream of consciousness through daily actions so small and mundane that you couldn’t possibly change them.
If you grew up in places like Dayton, Parkersburg, or Meigs county, water politics is a touchy subject. Through time, affective bonds from these experiences emerge, sublimate, and petrify as you meet people who refuse to accept the chemical sublime. The chemical sublime is a lot bigger than home, but I learned to attune to it by working on a house. Three years before I began fieldwork I met my first participant Danny when we worked together washing siding at a local bed and breakfast. Danny insisted that we wear raincoats as we worked to protect ourselves from the cleaner. So, we scrubbed in the rain with raincoats. Most of his life Danny has worked jobs that exposed him to the chemical sublime as a condition of employment. Danny was born in Akron, OH (the so-called “rubber capital of world”) where he dropped out of school in the sixth grade. His first job involved bucking bags of concrete onto freight cars. After he got sick of breathing silica dust, Danny moved, at 15, to a Job Corps center in west Dayton near my childhood home. On our first day working together, Danny and I discussed the Dayton Program, environmental activism, and how I used to deliver to EPA superfund sites when I worked for UPS.

Danny came to southeast Ohio in the early ‘80s with the activist collective *Earth First!* to protest a strip mine in the Wayne National Forest. At the time, Danny was living with a group of activists who, under the moniker “Seeds of Peace,” provided logistical support for large-scale environmental protests. During his “Seeds days,” Danny lived on the road as a seasonal worker where he ended each year picking berries in Maine. After the blueberry stains faded though, he found himself in an abandoned Chicago warehouse with a couple “traveling partners.” He decided to leave Chicago when found himself on
the subway “looking at his shoes like everyone else.” Later that month he hitched a ride
down to a buddy’s farm in Albany, OH with his girlfriend Jenny, and their dog. After a
week, the “buddy” told him to get rid of the dog or get lost because, as Danny
remembers, “my dog had a reputation and they had chickens and that sort of thing.”
Danny’s got a soft spot for dogs, so he moved with Jenny to a “Cabin on Thompson
Ridge with no electricity and a hand-dug cistern.” Although “the transition from real
urban—22nd street in Chicago to Thompson Ridge was a culture shock,” after his first son
was born on Thompson Ridge, Danny bought land in Sweet Holler and began building a
home for his family.

Sometimes when we work together, Danny tells me how he lived most of his
younger days out of a seabag with a German military surplus coat that would double as
pup tent in a pinch. Although it was a lifestyle of poverty, it was one that exposed him to
environmental organizations like Earth First! Danny is always careful when he discusses
his time with Earth First! In 2002, the FBI designated Earth First! a domestic terrorist
organization due to the group’s use of “eco-sabotage” at logging, mining, and
commercial construction sites. Informally, activists informally refer to “eco-sabotage” as
Monkeywrenching, and a favored tactic is tree-spiking, which FBI Domestic Terrorism
Section Chief James Jarboe describes as “the insertion of metal or ceramic spikes in trees
in an effort to damage saws as a tactic to thwart logging.”21 Although there have been
zero fatalities attributed to monkeywrenching, in 2005, at the height of the “War on
Terror” FBI deputy director John Lewis labeled “eco-terrorist groups” like Earth First!
the “No. 1” domestic terrorism threat facing US citizens.22 A year later, his agency’s
“Operation Backfire” netted seventeen federal prison stints for eco-saboteurs on felony charges including “arson, conspiracy, use of destructive devices, and destruction of an energy facility.” At sentencing, US District Court Judge Bill Rogers issued extended sentences, “owing to terrorism-enhancement penalties.”

In the wake of “Operation Backfire,” the now defunct, Earth Liberation Front.com advise a lone-wolf approach to direct activism:

Remember, act alone and don’t conspire. Focus on one problem and put you heart and soul into that one thing. Don’t rat out your comrades and do no harm to all living beings; that includes Mother Earth. If you do choose to practice civil disobedience, be prepared to go to jail if you’re busted. But keep in mind, you won’t be an effective “ecommando” or activist behind bars. Think for yourself! Don't follow leaders.

Danny does not remember Earth First! as a violent organization. In fact, before moving to Athens, he spent a year and a half with Earth First! activists walking from LA to DC as part of the “Great Peace March for Nuclear Disarmament.” In “Seeds of Peace” Danny stocked a “guerilla kitchen” by dumpster diving and he tells me that donut shops have the best dumpsters. I believe Danny did these things, not as a terrorist, but as a citizen sick of watching the chemical sublime play out in daily life.

Today, if we’re working together and we encounter a wasp’s nest, Danny uses a hose rather than Raid because of the chemicals. Most of the time he eats almond butter or hummus instead of meat. If I show up at his house with a Burger King bag stuffed behind the back seat of my truck he gives me shit about it. When I am sick or hungover, he’ll
send me home with a bottle of charcoal pills “to absorb the toxins.” Danny believes in a
simple premise that the health of an ecology may be learned by studying how matter is
consumed by the body.

In the chemical sublime, bodies are made disposable by a globalized tragedy of
the commons, which frames contamination in terms of economic cost. When citizens act
to protect these resources, they are labeled “domestic terrorists.” In her 2012 book
Animacies: Biopolitics, Racial Mattering, and Queer Affect, however, Mel Chen defines
toxicity as “a potency that can directly implicate the vulnerability of a living body.” For
Chen, bodies need not be stable, human, or even wholly organic to be poisoned, and as
she argues, how we choose to describe, define, and police matter discloses hierarchical
assumptions about who (or what) society deems worthy of veneration. I’d argue that
today the logic of toxic capitalism embodies capital with more vibrancy than the people
and ecosystems poisoned by the emergent properties of a chemical sublime. As a result,
many of my participants describe their home as a fellow being who dwells on earth:

Sasha: I guess there is an intentionality to the layout and I was thinking about the
house as a body or unit as I designed it. A body has things going in and out of it
and kind of requires life to be a home and a body requires life to be a person.

And:

Angie: And so, there is this learning, a continual learning from the building. But I
also think that the building is all about reuse and repurposing. So, I think of a
home [like] life support. They are hooked up like if you were in ICU in a hospital,
they are hooked up to all kinds of things. And if you take away those things that
they’re hooked up to, the building really begins to deteriorate. In fact, it does. When there’s no human living in it, it begins to deteriorate and anybody will tell you that. Real estate agents, bankers, investment people will say, “You know when a building’s empty. It’s just ‘gunna start to deteriorate.” So that tells you that if you don’t have it hooked up to all these life support, if this building is not hooked to life support it’s not able to maintain itself.

My participants do not view home as an escape from material conditions of life; they do not go off-grid to escape the chemical sublime. Rather, they reinterpret home as a post-human body that acts as a “miner’s canary” to determine the health of an ecosystem and teach others about sustainable living. Like me, they believe that when we abandon homes, they should fall into disrepair. When homes abandoned organic processes of dwelling, people end up in the ICU. A home on life support rather than a human. There is a profound difference.
Today I’m at a family farm on the outskirts of New Marshfield, OH to meet a cob builder named Stanley. Cob is an earthen building material made of clay, straw and sand, and according to the 1883 pamphlet “Early Settlement and Material Progress,” New Marshfield was settled in the late 1770s by the Ohio Company in what the author calls “The White Man’s Advent.” For over a century, New Marshfield housed a railroad stop linking it to nearby brick manufacturers. Towns like New Marshfield, represent an entry “data point” for studying how everyday matter such as clay, bricks, and coal draw vitality from a place to provide comfortable living in another.
Today trains, mines, and bricks are a thing of the past, and New Marshfield’s tracks have joined a long line of forgotten B&O stops including Moonville and King’s Hollow. With this decline in industry, the towns where my participants live have recently appeared in hip outlets ranging from the New Yorker, Atlantic, and the Swiss publishing house Strum & Drang. It is a semiotic parsing of out of the daily problems of poor white folk, who, according to one article, fall victim to right-wing “grifting” due to everyday life in “opiate ravaged, post-industrial shitholes.” If you grew up in one of these so-called “shitholes,” then you recognize that these smug one-liners and dour photographs do, in fact, have a material consequences. In 2017, the top Google image of New Marshfield, which is featured in place of the typical city portrait, features a home awash in wood paneling as an overweight man wearing work boots and camo ball cap sprawls belly first on his couch. Other fetishized images of New Marshfield feature half-naked toddlers, double-wide trailers, and a gaunt teenager lighting his bong inside a home where blankets shroud each window.

The internet has changed the way that America consumes the Ohio River Valley—from coal to discourse—and it has made New Marshfield an unwitting posterchild for Appalachian poverty. So, if you don’t live “‘round here,” you may find it surprising that I’ve come to New Marshfield to learn about an indigenous building technique from a self-professed Quaker who half-jokingly refers to his homestead as “six humans, tree people, frog people, and cat people.”

For the past twenty years Stanley has lived in New Marshfield where he’s dedicated his life to off-grid living and environmental activism. Like John and Danny
before him, Stanley, his wife, and three children moved into a bus before building their homestead. At the end of my time with him, I realized that the habits accrued from life inside a metal tube are important affective precursor to Stanley’s environmental awakening, and he was sure to note the bus during an interview,

So, we, a family of five [were living in] the bus over on the far side. And the bus remains, and it was part of the house. Refusing to be part of the housing scam and the banksters and all that. So, we could begin to take it all onto another step of thoroughness with all the basic questions beyond what usually gets addressed. Today the bus is part of what Stanley calls a “regenerative community,” of ecovillages that he believes, “will facilitate and embody an ever-rising consciousness that honors each other; honors the earth; and stabilizes the population, climate, and consumption in ways that the very creation itself will celebrate.” To help sustain his vision, Stanley organizes community build workshops about cob building. After I offered free labor for a chance to learn the trade, he invited me to his property. Over the following week, I learn about cob, “chicken tractors,” and life underwater.

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On a muggy July morning as my truck blares down the gravel driveway, I see Stanley’s massive frame hunched over a folding card table outside. Before him lay a wooden hay fork, scythe, and an orange water pump blackened by use. As I step out of the truck, Stanley removes the scythe’s hooked blade. Thumbing blade’s edge, he tells me, “People don’t know their own strength. You can get to swinging one of these too hard.” Stanley is the first farmer I’ve met who doesn’t use a gas-powered trimmer to cut
back the jimson-weed, pokeberry, and other riff-raff that seasonally encroach on pasture.
A scythe seems grossly inefficient, especially now that Stanley must weld, peen, and 
regrind the blade. As he works, I notice that he’s missing his right index finger, which 
ends in a fleshy nub just above his second knuckle. Seeing it makes me uneasy, and I 
bury my right hand into my trouser pocket to hide it from view.

When Stanley’s done tinkering with the scythe, I follow him to a modular ranch home with pale-blue siding and wooden handicap ramp. Inside, the front door opens to a 
modest living room with plush wall-to-wall carpeting. Across from three sturdy 
bookcases, a pitted maul leans against a cast-iron woodstove. The bookcases, all in oak, 
serve as a community library where New Marshfield residents may borrow books on 
permaculture and natural building. In the coming months, Stanley tells me that he’ll be 
starting a reading group that he hopes will, “bring the elements of a new story of 
sustainability,” to provide “fresh frameworks of how things really work rather than what 
we’ve been boxed up into doing.”

As I furiously compile mental notes in the living room, Stanley turns off the 
kitchen stove where a blue enamel kettle has hissed to life. After pouring two cups of 
tea, we sit at the kitchen table watching the morning sun climb a nearby ridge. Once 
Stanley finishes his tea, he leans back, shifting his position in the chair beside me. After a 
moment of silent contemplation, he sucks air through his teeth in a soft whistle before 
turning to tell me, “Today doesn’t look like a good day for cob, maybe we’ll work on the 
scaffolding and tie downs.”
Frankly, I’m a little frustrated. I didn’t wake up at 6 am to come meet a “scaffolding expert.” But after this show of hospitality, I’m in no position to argue, so I follow Stanley outside where we gather supplies for the day’s work. At the cob house, we’ll strip ripped tarpaulins from the temporary roof, replacing each with scavenged billboard advertisements that—judging from the well-manicured Ralph Lauren models adorning each canvas—look to be from the mid-90s.

Stanley’s cob house is in a marshy hollow on the southwest edge of the farm. Although the name is fitting, the marsh is a biome that Stanley has cared for care for ever since he “brought out a ‘dozer and a backhoe” to cull clay for the home. The day the equipment arrived Stanley tells me Ohio gave birth to a “four-inch rain” that rung the cabin’s foundation “like a moat.” After repairing the damage, Stanley considered the rain a sign and decided to transform this foundation pit into a wetland ecosystem.

Although water in a marsh may stagnate, not all life is aerobic. Wetlands afford growth at near unlimited rates. Bamboo, sedge grass, and cattails (genus *thypha*) thrive here. Due to this abundance, however, you’ll need a Husqvarna push lawnmower built like a tank and most of a morning to clear a path. On the way, you’ll pass an outdoor solar shower; a half dozen wheeled chicken coops Stanley calls “chicken tractors”; and John Lady forest, named after a Confederate deserter who, according to local legend, was hung nearby.
Figure 33: Ralph Lauren as a roof. New Marshfield, OH. Author image.
Over the last twelve years, the cob house has been on mothballs seeing as building “became just fucking impossible,” after Stanley’s youngest son Noah, “was given the path of cerebral palsy.” But today with my visit, the dream’s back on, and we use the stroller Stanley bought after Noah’s first surgery to haul tools. It’s been years
since Stanley hosted a cob workshop, and I can tell he’s itching to get started. As soon as we arrive, Stanley begins staging tools as he breathlessly whips through the afternoon’s itinerary.

Stanley speaks in clipped, short bursts—the cadence of which seems at odds with what he’s saying. It’s a jarring rhythm that took me the better part of my first day with him to figure out. Before he took up the writings of the 18th-century Quaker John Woolman, Stanley enlisted as a sailor aboard a fast-attack nuclear submarine. Like most former military, once you knew this, the faintest traces of this past life shine though in, say, the way he cinches his belt squarely in line with his trousers’ fly seam or in the interminable mise en place by which he loads and unloads tools. And then there is the inflection with which he ends sentences—accentuating the last syllable as if to demand a response.

Stanley enlisted at the height of the Cold War and *The Hunt for Red October*. So, once I figure Stanley for a sailor, we get to talking about his Navy days. Stanley tells me that since nuclear submarines produce their own fresh water and oxygen, crews stay submerged for months at a time. While seafaring inevitably gets boring, deep below the surface, time slows to a trickle. Trapped underwater, reality slips adrift of temporal moorings. During our interview the following weekend, I asked Stanley if this experience steered him towards environmental activism:

It took ‘til I was about 30 for it all to come to a head. So, all the while [I was] taking on and trusting the cultural messages and saying, “Okay, this is how it’s done.” I was able to feel there was something there that wasn’t honoring the
elemental and authentic me. I wasn’t available to exist in that in a way that felt right. So, then you start thinking after five patrols, submerged three months at a time, “What’s behind all of this?” And then after four years on submarine duty, it took another seven years for the clarity to realize there was something very profoundly wrong with the way the culture is wired and what makes it tick. And it’s not something that starts here [in the Navy]—we’re surrounded by it.

At the time, Stanley trusted what he now calls, “a post-WWII industrial complex of consumption.” As a result, he ended up in a militarized pressure cooker of self-doubt about what being-in-the-world means. In this radioactive aluminum tube scooting along the ocean floor, Stanley began questioning what it meant to dwell on earth:

Stanley: So, that was kind of kept recurring [pause]. Various social and consciousness elements in daily life began to reinforce it. That feeling of not understanding or not having a way to even express what was going on, but knowing something was up that wasn’t right. Okay, all the while discovering that post World War II, we had all of [this] capacity for the war machine and we was looking to find ways to basically ramp up our consumption as a country. It was a definition of patriotism [based in] mass consumption.

Sean: So, patriotism was consuming to a certain degree?

Stanley: Yeah, yeah. And it’s like after 9/11—but basically that we were encouraged. When the going gets tough, the tough go shopping.

When Stanley was released from the Navy in January of 1970 he decided that he’d done his time in the chemical sublime and that he didn’t much care for it. He spent the next
seven years traveling Ohio collaborating with local nonproliferation organizations including the “Reverse the Arms Race Federation,” and the “World Peacemakers of Ohio.”

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Out at the cob cabin I find out that an important part of Navy life is learning to rig. If the heart of a ship is her crew then her nervous system is most certainly her rigging. Rope is essential to sailing, and a typical 18th-century *Man O War* frigate, such as the HMS *Victory*, contained at least 26 miles of manila cordage strung taught along sail, shroud, and mast. To prevent corrosion, sailors climbed rope scaffolding with buckets of tar to guard the woven tendrils of their floating home from the sea’s weathering grip. As they worked, inexperienced *pollywags* learned the rigging and rhythms of sea life from more experienced “salty” *shellbacks*. Former sailors will tell you that, even today, you must tie knots to join the ancient mariner’s “Order of Neptune.” If you learn the habits of home—even a home *sans* soil—you’ll have a vessel stronger than any singular knot of relation. For participants like Stanley then, you can only begin to understand his philosophy of home once untangle the sheets and tangles of his dwelling.
Figure 35: Three clove hitch variations on a rough-cut post. New Marshfield, OH. Author image.
Learning to rig is learning the habits and rhythms of a bygone era to hold steady dwelling amid a vast, roiling ecology. In a way then, it makes sense that Stanley would look for home in an earthen substance like cob, which petrifies in rock-like walls. But even with cob you can’t avoid the erosive quality of water. Like all earthen construction, cob is water permeable and experienced builders ensure that their home has “Good Boots” (a tall foundation) and a “Broad Hat” (ample roof overhang) to protect against water damage.

In place of a hat though, Stanley’s assembled a series of makeshift tarpaulin scarves to protect the cottage as it sits dry docked. In his marsh, nylon stretches from tree-to-tree and the forest is awash in bowlines, hitches, and sheet bends. Moreover, since Stanley plans on reusing the rope, we spent the first hour carefully unraveling each knot. While we work, he explains each knot and tells me about the first cob workshop he hosted twelve years ago. Once we’ve made our way inside, I take a few photos and Stanley shows me how he learned to pockmark the cobs surface with a hand-sharpened dowel before adhering finish plaster. I tell him the wall looks like mud dauber’s nest. “You don’t tell nature what to do,” he replies, “It tells you.”
For Stanley, building a home meant considering *how* he would build, and Stanley chose cob due to Appalachia’s abundance of water, clay, sand, and straw. Although cob and brick are compositionally speaking quite similar, each material sustains different ecological rhythms. Cob is worked in a free-form manner, which lessens the cost of labor and allows owners to incorporate recycled materials. If cracks develop they are easily patched with a fresh batch. And finally, since cob never sees the inside of a kiln, petrification is aided by the sun rather than forest. In terms of cost, efficiency, and skill, cob is one of the most sustainable building techniques to date.

Cob is also a far more sensory experience. Most builders soak their straw to create a “slip,” so if you never grew up on a farm, you’ll soon learn the smell of rotting hay.
Experienced workers also fine-tune their mixture by touch; a good mix should be dry enough to mold but wet enough to stick against the bottom of an extended hand.

Reflecting on the materiality of cob, Stanley notes,

> Well, it’s a fun and inspiring example of a continuum of ways to bring living free and living systems and common sense back into daily life. And it’s a fun to work with. Very satisfying way to use your hands and your head and your heart and your mind, and do it with friends and play while you’re doing it. And so that went with [my] ethics of human habitat rebalancing earth processes and climate.

The major downside to cob is that it is a race against the clock. As the mixture dries it becomes less workable, and you want to get its “hat” on as soon as possible. Because of these factors, cob building historically relied on a glut of community labor to mix, carry, and apply materials. In an age where we no longer build together though, you’d go bankrupt hiring help, and as Wes, another cob builder I interviewed, described, the scope of building can be daunting:

> I do remember the first day that we started mixing cob. I had finished mixing the foundation and everything and I had a young friend out helping me and we didn’t have a good technique yet, and we were sorta mixing the straw with our hands like a big pile of clay and it was incredibly slow and like in three or four hours we had done like an inch of cob around the whole thing, and I felt like just overwhelmed and thought, “this is going to take me ten years to do at this rate.”

Building with cob takes time. As a result, cob has faded from public memory in the Ohio River Valley as it fell victim to modern, commercial rhythms. For this very reason,
environmental activists like Stanley teach cob workshops as a form of community building. If you point out how labor-intensive building is, they’ll tell you the labor itself can anchor a community. As Stanley explains,

So, that’s empowering people to take charge of their lives and basically be able to afford and create a life for themselves. So, it’s the idea that you’re able to pass on the education and then give the tools. [It’s] done as a gift to help friends and neighbors take charge of their lives—back away from a very destructive domination culture.

The story of environmental destruction in the Ohio River Valley needs to be told, but we also need to pay attention to how individuals like Rachel and Alex, Lisa and Jacob, Danny and Stanley build homes to redirect these erosive/corrosive rhythms within a community. For these individuals, domestic construction attunes the body to dwelling with matter rather than against it. These individuals go off-grid not to “unplug” from society, but to offer alternative ways of community building rooted in care for shared resources.

For Stanley, his path to off-grid living is a story about peering into a world where—to borrow nuclear physicist Robert Oppenheimer’s translation of a phrase from the Bhagavad Gita—“I am become death, the destroyer of worlds.” What Oppenheimer recognized was a profound terminus of human labor dedicated in service of death, contamination, and decay. Thirty years later these experiences led Danny to the Great Peace March, and precipitated Stanley’s environmentalism. For both men, everyday life
gave way to unsettling experiences that, for the most part eluded linguistic convention, preferring to travel a circuitry of affect. As Stanley notes,

It was an internally felt sense that there weren’t words or concepts for, both at home or anywhere. It was at a level beyond what the interactions were, sensing the interactions and where they were coming from and what powered them up in a different understanding level than was even accessible, but just hearing it and feeling.

Posthuman affects, like nuclear submarines, work on a principal of fission. At an atomic level, matter is pried apart to spawn inhuman forces. As a means of power or propulsion, it’s a closed system that relies on the second law of thermodynamics to sustain entropy at near cataclysmic levels. In turn, I think of Stanley’s performance of environmental activism through vernacular building as an affective emergent property of the first law of thermodynamics, which states that energy is neither created nor destroyed. When life in on a sub ceased to be vibrant or sustainable, Stanley began to think about other life-forms. When he arrived back on land, he discovered a rising tide of environmentalism. Caught in this affective headwind, Stanley lashed himself to a new vision of home—one that gradually emerged from an underwater doomsday device in a trickle of peacenik homesteading habits like Kombucha, compost, and solar-showers. In search of this lost rhythm, Stanley returned to a baptism of dirt.

I believe Stanley’s underwater years scrubbed him of daily terrestrial habits (e.g., smelling cut grass before rain, feeling sunshine on the back of your neck, and living in a space where humans aren’t the only animals). Dwelling at sea can be a surreal
experience—one that Danny remembers from his Merchant Marine days aboard a seagoing tugboat as similar to the melting of clocks depicted in Dalí’s *Persistence of Memory*. Traditionally, when out on water, sailors develop new traditions like rigging or celestial navigation to keep life afloat. Deep below the surface, though, Stanley couldn’t tell time by the sun, moon, or stars.

Dirt, Rhythms, and Research

As building materials, things like dirt, clay, and coal represent the forgotten bits of home we often overlook. We think them invisible and, therefore, insignificant. But materials—and the affects these materials produce—give rise to a home. If you’ve ever used electricity, stayed in a house, or eaten a prepared meal, you’ve entered this domestic ecology. In turn, the study of vernacular architecture is useful for understanding how quotidian experience orchestrates more sustainable practice. To pay attention to this ecology you must attune to it in daily habit. Moreover, since affect shift daily, you never know when this may happen.

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In November of 2014, I went to my first academic conference. I was a second-year doctoral student and I presented at an ethnography panel titled, “Remains of the Field.” I spent the rest of the week exploring Chicago and a discipline that was now 100 years old.

The conference was at an old-money Hilton with a polished marble façade, twin spiral staircases, and a grand ballroom with ornate gold-leafed carpet and eight crystal plum-shaped chandeliers. After taking in the splendor, I walked to the nearest CVS where
I bought hair gel and a black plastic comb. If I was going to succeed in academia I had better ditch the workboots and start taking fieldnotes.

During our week in Chicago my wife and I commuted to the hotel, so we had a CTA Ventra card. When imposter syndrome emerged, I’d play hooky from panels I promised to see and we’d explore Chicago together. That week we saw the Sears Tower, a German *Christkindlemarket*, the Navy Pier, and the Chicago History Museum. I remember the history museum best. Inside, we saw an exhibit on Indigenous cob building, and, in the basement, there was a glass-cased wall dedicated to the “History of Dirt.” When the museum closed, my wife and I shivered together in a Plexiglas bus stop where I wrote a note to myself to describe how wind whipped a Styrofoam coffee cup into lake Michigan. Although this project is steeped in a lifetime of affects accrued in the Ohio River Valley, I think my fieldwork began at a bus stop on lake Michigan when I thought about whether Styrofoam decays.

Objects like work boots, dirt, or a Styrofoam cup “do things.” Over the course of this study, I’ve thought a lot about how affective fields emerge from surrounding space through the collision of such matter in the service of dwelling. To craft these products or consume these products is to enter a material ecology of dwelling that Kathleen Stewart describes beautifully in her meditation on the generative, emergent properties of everyday life:

The stories that make up my story—disparate and arbitrary scenes of impact tracked through bodies, desires, or labors and traced out of the aftermath of a passing surge registered, somehow, in objects, acts, situations, and events—are
meant to be taken not as representative examples of forces or conditions but rather as constitutive events and acts in themselves that animate and literally make sense of forces at the point of their affective and material emergence.29

When I write about a material ecology I’m careful to describe affect with words like “collision,” rather than “interaction,” or “exchange.” In part, this is because I’m interested in studying domestic affects that are fleeting or transitory in nature. It is these “little things” like bobby pins, knots, or dirt that give rise to a home. But an affect-as-collision metaphor also reminds me that dwelling is tempered by temporal and biological cadences. As a more-than-human ecology, the Ohio River Valley teems with life because of the seasonal mixing of water and dirt. We need soil and water more that it needs us.
Conclusion: Big Muskie, King Coal, and Domestic Stories of Resistance

A Field Note on Route 13.


Into the flatlands. Hay in tidy rows. Still green, still verdant but the outermost edges of the leaves give way to the heat, turning brown. Tall-stalked yellow flowers. Used to braid them as kids. And cupped flowers that grow in ditches on the side of the road. Amanda will tell me the color. I’ll stop by on the way back.

A white clapboard church, a small rectangular with a primitive steeple. The sign outside says, “If you die today are you ready to meet Jesus?”

Entering Morgan country and a highway adopted by the Morgan county republican party.
Today I’m visiting Big Muskie’s bucket. I start on route 13 near Chauncey, OH. Chauncey’s a place where accents matter. The locals pronounce it “chan-see,” a relic from the whiskey running days when to say “chawn-see” meant you might be a lawman looking to bust-up a still or two. On the outskirts of Chauncey, I pass a grey cinderblock pound, where the dogs are mostly coonhounds or pitbull mixes and continue down route 13 to the old mining towns of Glouster, Trimble, and Jackson, with their faded coal murals and vacant shops. Near the one-street town of Millfield, I turn left on route 78 to pass a cratered red-brick smokestack and bronze plaque in tribute to the 82 men buried half a mile underground when the No. 6 Poston Mine collapsed in the fall of 1930.
Why visit Big Muskie? The easy answer is that John—the son of an excavator—
tells me to. Big Muskie, unlike grandpaw Melvin, is a massive 27,000,000-pound
dragline excavator built by the Bucyrus-Erie Co. in 1969. Dragline excavators are used to
remove any material—living or otherwise—that is not coal, and Big Muskie is the largest
earth mover ever constructed.

In 1947, the Strip Coal Mining Act was passed in Ohio, allowing mine operators
to move work above ground if they paid a $100.00 “reclamation” bond per acre.\(^1\) The
legislation quickly mechanized the coal industry as labor-intensive underground mines
fell from 1,155 to 11 over the course of the 21st century.\(^2\) Although this change was a
boon to coal barons, who turned to massive above-ground rigs like Big Muskie, the
legislation effectively put 47,988 southeastern Ohio miners—or approximately 16 percent
of the total population—out of work.\(^3\) Today, in the Ohio River Valley there are more
employees of the fast-food chain Arby’s than miners and the ghost towns of San Toy,
Eclipse, and Moonville all pay testament to the loss of coal jobs.\(^4\)
Figure 38: An 1887 poster for S.J. Patterson Wholesale Coal in my hometown of Dayton, OH captures the historic disparity of mineral extraction from the Ohio River Valley. Image courtesy of the Library of Congress.

Until its decommission in 1991, Big Muskie was used to excavate 20,000,000 short tons of soft brown lignite coal from 110,000 acres leased by the Central Ohio Coal Co. A 1997 news release by American Electric & Power (a former owner of Central Ohio Coal) estimates that during operation, Big Muskie removed 39-million pounds of material per hour.5 The bucket alone, which was left intact after Big Muskie was scrapped in 1999, is large enough to fit two semi-trailers side-by side.

In the fall of 1999, AEP announced the installation of a national miners’ memorial featuring Big Muskie’s bucket at the southernmost edge of their 60,000-acre
“ReCreation” site. ReCreation is a former strip mine, nestled between McConnelsville and Cumberland, OH, and the memorial, according to executive vice president William Lhota, “captures AEP’s mining history and is a special place in its own right that will leave visitors with an appreciation of the work done by the men and women who mined coal in southeastern Ohio.” Continuing, Lahota notes,

This park honors those who worked in the coal industry so that the rest of us can have heat and light and other conveniences we take for granted. Coal was indeed the focus of life for families in this region of the state. This memorial tells a story as it says thanks to the people who did this work. We’re grateful for the commitment by AEP to maintain its ReCreation Land—we’ve had a great partnership in terms of forestry, wildlife habitat and recreation.6

At the opening of the memorial, AEP bussed in a local band from Morgan High school to perform. A photo placard in the memorial’s welcome center pictures the 68-person band, including eight tuba players and a 13-member color guard, all of whom fit comfortably within Big Muskie’s 240-ton bucket shovel.
Miners’ Memorial, where Big Muskie is located, is part of a larger, targeted campaign over the legacy and public perception of mineral extraction in the Ohio River Valley. Proponents of mining often speak of a “war on coal” where, to quote former CEO Don Blankenship’s speech at Massey Energy’s “2009 Friends of America Labor Day Rally” in Holden, WV, “environmental extremists are all endangering American labor. In fact, they are making American labor the real endangered species as they tell us that their goal is to save the planet.” But today, as I stand in the bucket of Big Muskie, I can’t help but recognize the irony of a miners’ memorial, paid for by a corporate mining operation, featuring the machine that broke southeast Ohio’s workforce. King Coal—contra Don Blankenship—has never been a friend of labor. And labor, after all, is what makes a home. Without labor, nothing prospers.

Over the course of this project I’ve shown how vibrant matter combines within domestic material ecologies to shape habits of home for those who choose to live off-
grid. By way of conclusion though, I’d like to expand this focus consider how the effects of domestic vibrant matter shapes public memory in the Ohio River Valley. In this way, domestic materials—and the machines that extract/produce this matter—move beyond home to enter the realm of public discourse.

The Miner’s Memorial, Big Muskie, and my participant’s homesteads are all symbolic deployments of space in larger a war over a history of resource extraction. It is a history that snakes through the hills and hollers of the Ohio River Valley in skirmishes over King Coal, such as the Battle of Blair Mountain in the summer of 1921 when 10,000 “rednecked” miners donned red bandanas before waging guerilla warfare against corporate strikebreakers or the New Straitsville fire set nearly 40 years later by striking miners that, 119 years later, resurfaced above ground in the Wayne National Forest in December of 2007.

As summarized by public memory scholars Carole Blair and Neil Michel, memorials like Big Muskie’s Bucket, “engage us by asking us to think. Rather than telling us what to think, they invite us to think, to pose questions to interrogate our experiences and ourselves in relation to the memorial’s ‘Discourse.’” Memorials, as containers of public memory, subconsciously condition the visitor to fabricate cultural-political identities through romantic obfuscations of past violence. Here, forgetfulness and memory, as psychologist Jonathan Metzl concludes, is “neither random nor innocent,” but instead functions together as “an intensely political act, an act that is requisite for the construction of particular forms of truth.”
In response to the material impact of resource extraction in the Ohio River Valley, the Miners’ Memorial comes semiotically equipped with a welcome center framed in red-oak timber (grown on the reclamation site) and a Wall of Honor celebrating the history of AEP’s relationship with southeastern Ohio. For those who might be unsure about the history of strip mining or mountaintop removal then, the Miners’ Memorial is essentially a local advertisement for King Coal that, like Big Muskie, looms large over the Ohio River Valley.

It’s easy to dismiss Miner’s Memorial as a trumped-up elegy to King Coal. But to do so misses the point. Space, no matter the design or motivation, takes time to hail subjects into being. Or more specifically it takes patterns or action/reaction within a material ecology. In this way, ideology is born from a daily accretion of affect as individuals enter material ecologies through domestic habits of consumption. In sum, a space needs ecology to become a place and a matter needs bodies to become vibrant. Miner’s Memorial does not exist without Big Muskie’s bucket, which in turn does not exist without daily habits of consumption that pay fealty to King Coal.

Habituation of individual to space, space to architecture, and architecture to material ecology—this progression represents the steady accretion of habit to imbue architecture with ideological significance. Homes are moved through, experienced, and, but above all, all lived in. It is an ecological premise that strikes at the heart of Henri Lefebvre’s concept of a socio-political “production of space,”
These spaces are produced. The ‘raw material’ from which they are produced is nature. They are products of an activity which involves the economic and technical realms but which extends well beyond them, for these are also political products, and strategic spaces. Lefebvre’s implicitly recognizes dwelling as a space of extraction: Materials are extracted from nature, molded through daily action and discourse, and thus combined with daily habit and architecture to produce certain affects.

In the case of King Coal, these affects predispose a mindless consumption of vibrant matter in the service to dwelling. As logics of domination they suggest that you only concern yourself with the “here and now.” Instead of considering the trajectories of dwelling in the Anthropocene, modern homes structure domestic sensibilities according to what is “comfortable,” what is “civilized,” what is “stylish,” and what is aesthetically pleasing. Here, you must not think about effects. Nowhere is this clearer than at Big Muskie. As a public memorial, Big Muskie brushes aside environmental concerns in the name of comfort: The red oaks, though spindly and few, will grow back (trust us). And besides, people can always move. In fact, we even built highways to help you move.

Today with the loss of jobs in the Ohio River Valley due to dragline excavators like Big Muskie, the war over King Coal has shifted fronts from organized labor to domestic habit. Here, solar panels, composting toilets, and other vernacular building techniques allow my participants to enact environmental activism as consequence of dwelling. Such building practices are important to these individuals precisely because they structure a mindful consumption of daily resources. During an interview on Haga
Ridge, for instance, John reflects about on how living off the electricity grid impacts the daily countenance of his home:

[When you’re off grid] You consider the way you’re using your [solar] power. If the sun is shining, you might throw that additional electric item on. Do some vacuuming, what have you. But you were pretty conscious on those cloudy days that you didn’t have that extra power. I like a buddy of mine’s story. This one buddy of mine was telling me of being at a friend’s house that was by here. So, he would turn on the lights when it got dark early in the evening and the place would be lit up and he would be moving around the cabin doing different things and then he would find that towards the end of the evening he was at the table under this little light as it got dimmer and dimmer. It would be nice to think that you could plug into the grid and still keep those habits to view power that way because it’s still wreaking havoc out there when your pulling it in. But it’s just really hard to do.

Through the physical design of their homes, off-grid homebuilders attune to the ways in which modern habits of consumption ripple through an ecosystem with unintended consequences. As I’ve learned over the course of this project, dwelling entails the consumption of resources. Every day, others die so that we may live. To this end, home is no exception.

~

My participants go off-grid to unplug from unsustainable domestic habits. But as I’ve learned there is no beginning or end in a material ecology, only points of entrance.
and departure. Here, domestic space, whether it be the Greek oikos or an off-grid Earthship, disrupt local ecologies. With respect to the latter though, vernacular architecture weighs the design and consumption of a home against the long-term health of an ecosystem. The idea is to cultivate habits of dwelling that limit disruption and future growth. Describing this Angie notes,

So, [with modern construction] the person we’re trying to earn the money for is that developer who's gonna come, do what they do, make their fortune and leave. Not thinking about the future and the fact that that building needs to last for more than 100 years. [So] we'll ask, “Will that [prefabricated home] last more than 100 years?” And then you'll see people back up because, “Of course not. We're putting some crappy thing in there,” but I think the value of considering the long-term investment of these things comes back to saying, “Alright, everything is involved.”

Sean: Yes.

Angie: Every single thing. Because people, our ancestors, everybody has ancestors who used cob. Everybody. I don't care who you are, what world you came from, that they used cob. They used a lot of the materials that we use.

I began this project at the juncture of two barns to illustrate how the habits and rhythms of home implicate, culture, and other species over time. But there are moments when affects shift. When I was young, cicadas reminded me of a friend who ate them for a few bucks and thrill. Now they remind me of fieldwork. I no longer think of barns when I
think of home. I think of cob, King Coal, and the first time my dad and I took a black and white Holstein calf to slaughter.

Why visit Big Muskie? The easy answer is that John tells me to. But, the real answer, like most things in a material ecology, is far more complicated. I visit Big Muskie so that I’ll never turn on a light switch again without thinking about where it came from. I visit Big Muskie so that I’ll remember, in the words of Angie, to keep a home on “life support” rather than a human.

So, if you ever get the chance, go visit Big Muskie. When you’re there, step inside the bucket and let me know how those red oaks are doing. But most of all remember that this is your history too. Folks in Ohio died so that America could keep the lights on. Once you realize this, pay attention to vibrant matter around you—whether it be corn, your dog, or Big Muskie. Attune to a material ecology in daily habit. Like my participants, when you turn on the tap remember how it got there. If you use a Teflon pan to cook your eggs think about how DuPont’s legal counsel characterized gathering evidence that perfluorooctanoic acid (C8) had been linked to birth defects, respiratory failure, and cancer along the Ohio River: “The shit is about to hit the fan in West Virginia. The lawyer for the farmer finally realizes the surfactant issue [of C8 contamination]. Fuck him.” Likewise if you turn on a dryer, remember that the coal slurry damn at Buffalo creek was deemed safe by Federal mine inspectors four days before a spill 12 times larger than the Exxon Valdez killed 125 West Virginians. And finally, when you see brick or timber think of the cadences, rhythms, and habits that
brought these materials into being. Pay attention to domestic habits of consumption so that others may live.
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Appendix A: Participant Profiles

I met many caring, dedicated activists over the course of this project. For this reason, I leave this project with a short description of each participant. I view these participant sketches as an extension of my methodology. In the field, I am a detailed note taker, and upon returning from an interview or build, I wrote brief character outlines regarding the appearance, habits, and mannerisms of each participant. In a way, my rational for including this information is a logical extension of Chekhov’s gun: If one writes about a rifle over the fireplace, it must go off. Likewise, if I’m interested in how individuals attune to space through home-building, domestic rhythms, and habits, then I find that must end this project by describing participants in situ.

Daniel and Jenny

I first met Danny three years ago when I began graduate school. Danny is the living embodiment of a cultural outsider, a free-wheeling hippy with a faded blue-ink tattoo of a barn swallow on his left bicep. The word “freedom” unfurls in a banner over the bird’s bent neck. Like me, Danny grew up in rust-belt Ohio (although under very different circumstances). After sailing as a Merchant Marine aboard sea-going tug boats in the gulf, Danny took up jewelry-making and joined the great peace march to protest nuclear test sites in the deserts of Nevada. He moved to Appalachia over 25 years ago and now works as a house painter. Danny and Jenny have three kids, who all grew up in a house that they built together. During my fieldwork, I spent two weeks living at Danny and Jenny’s while the family was away. In the past, I’ve helped Danny install new siding, frame a small pole barn, and paint the exterior of his house—a job, which twenty years
later is still unfinished. Although he is over 30 years my elder, I consider Danny a close friend.

**John**

John is a carpenter of slight build with thick forearms and chafed, knobby hands. He runs a small construction business and recently has begun installing solar panels for homes and small businesses. John lives in a straw bale house he built at the end of a dirt road about a half hour from the West Virginia border. The closest building to his house is clapboard revival church, worn silver by weather, with white paint peeling from the window trim in flakes. Over beers one night, John told me about the intentional community of tiny homes at Fox Den where Lance, Cathy, Jimmy, Chad and Tory live.¹ Like Danny, he smokes, rolling his cigarettes cowboy style, no filter. Unlike Danny, he is recently divorced and worries about how the impending separation from his wife will impact the family homestead.

**Wes**

Wes was the first person I interviewed. I called him one April morning, stumbling over my words, while I paced frantically back and forth in my office. Wes runs a small farm and helped found an organization, Rising Appalachian Warriors, that works with local youth to teach outdoor activities and healthy eating. He grew up in the area, where his father was a carpenter and his mother oversaw the construction of this childhood home. He is soft-spoken, and was one of the first people to build with cob in Appalachia. As we conducted our second interview on foot, he showed me a small earthen cottage he built over a decade ago. A farm worker now lives in the cottage. After our interview, Wes
passed my name along to another Cob builder named Stanley.

**Stanley**

Stanley lives on farm where everything seems to be going on at once. Stanley has a bushy grey-flecked beard and wears a black-ribbon straw hat in the Amish style. He carries a small pair of pruning shears in leather holster and he’s missing part of his left forefinger, although I never learned how (and didn’t feel comfortable asking). The second time we worked together, Stanley fell off a ladder, trapping his foot between the rungs. When I interviewed Stanley, he was in the process of designing what he called an “eco-pod,” which he describes as a teardrop shaped home which crams a root cellar, green house, and living quarters inside a galvanized aluminum frame no bigger than a small pickup truck. Over the course of my fieldwork, I helped Stanley restore an abandoned earthen cottage on his property. During these work days, I learned how to build with vernacular building practices including rubble-rock foundations, cob, and earth-plaster.

**Laura and Rob**

Rob and Laura live on the outskirts of a small corn town about an hour from the Kentucky-Ohio border. I contacted Laura and Rob after my grandfather-in-law passed along a newspaper clipping about their home built from donated materials. Laura and Rob have two young boys, both under the age of five, and are in the process of building an earthship home with recycled truck tires, glass bottles, sand, clay, and straw. In addition to our interviews, I spent two weekends with the couple building an exterior wall using salsa jars, wine bottles, and earth plaster. When I last visited their home, Rob had finished framing the exterior of the house, and the family was living in a tent on the
Rachel and Alex

Rachel and Alex live on a battered hilltop some twenty minutes away from the sleepy river town of Pomeroy, Ohio. I met the couple after installing solar panels at their house with John. Together they built their rammed earth home on land that has been in Rachel’s family for generations. During our interview, Alex remembered the fear he felt as he watched an eight foot 2x4 slide off the roof onto Rachel while she was pregnant with their first child. Alex estimates the total cost of the home to be 15 dollars a square foot. After our interview, Alex took me on a detailed tour of the home, showing me the imprint of sticks and other debris that had been fossilized against the wall during construction.

Lance

Lance is the founder of the Fox Den intentional community. He is a country boy, who doesn’t like to make eye contact, describes himself as a recluse, and has troubles with his r’s. He grew up in a rural corn town—not a coal town—the type of place where Friday night lights and the feed store were the only social attractions. Lance is in the process of building his second tiny home; he lost the first one in a messy breakup. He’s conservative and, by his own admission, doesn’t really understand the tiny home fad. He built his home because it was a cheap, easy way to live. When he opened up his property to others, he was adamant that the community remain off-grid and out of the reach of “red-tape.” Each home at Fox Den must be less than 500 square feet, use a composting toilet, and generate electricity from an off-grid solar system (to avoid sewer and electric
utilities). For Lance, Fox Den is an experiment in robust individualism—a chance to show that everyday people can live off grid and live for themselves.

**Cathy**

Cathy is one of the original builders at Fox Den. Along with her teenage daughter, Cathy lives in a converted 16X16 storage shed on a gravel access road. From the outside, her home, painted a color she calls “mint chocolate chip,” looks like a whimsical over-sized playhouse. She’s twenty years Lance’s senior and, as a progressive, takes great delight in teasing him every chance she gets. The interior of her home is awash in unfinished plywood and drywall. She loves living in the woods and her favorite sound is the dull thud of walnuts skittering off the metal roof of her home.

**Chad and Tory**

Chad and Tory are two newlyweds who are the newest members of Fox Den. Together they are in the process of converting a 53’ semi-trailer into a permanent residence. Although the couple does not have formal construction experience, Chad studied theatre design in college and thinks of their home as an extension of the stage. During our time together, I helped the couple build a deck during a work party at Fox Den.

**Jimmy**

Jimmy, a man with thick wire rimmed glasses and a habit of rubbing his palms against the front of his trousers when he’s nervous, is still in the process of building his home at Fox Den. Like Cathy, he chose to build from a pre-fabricated storage shed. His home is still very much a job site as circular saws, tubs of drywall mud, and wooden
sawhorses take the place of typical home furnishings. Given the season nature of Jimmy’s job as a cabinet maker, his family is downsizing to a tiny home to save money. When I asked Jimmy if there was anything he would have changed about his home, he answered wryly, “a closet.”

**Angie and Benjamin**

Both Angie and her husband Benjamin are vague about their past, saying only that they once ran a small business together where they traveled from city to city for work in the non-profit sector. Today they run a small farm together in Muskingum County, although most of their income comes from workshops on homesteading topics including permaculture, solar panel installation, and green construction. Their farm, the usable area of which is no more than ten acres, employs 2-3 interns who usually stay for two months and live in a collection of primitive (read: limited electricity, no running water) adobe cottages. During my interview with Angie, we shared lunch in a poplar grove overlooking an old-growth forest whose topography predates the Mesozoic era some 240 million years ago.

**Sasha**

Sasha built her home on a flat-bed trailer while she lived in a cabin without electricity or water. Sasha views home as an “organic being” and before deciding on a tiny home she considered building a pit house (*Grubenhaus*)—or, as she put it, “I was just going to dig a really big hole in the ground and I was going to live in it... But then I decided that sounded pretty shitty [laughter].” At the time of our interview she had finished her home and was squatting on a gravel access road across from an abandoned
auto shop. Sasha considers herself, a “hell’a environmentalist,” and was adamant that her home was an extension of her artistic vision. During our interview, I sat cross-legged on the floor while ants crawled over my tape recorder listening to the heavy, heaving groans of logging trucks jake-braking down State Route 32.

**Jacob and Lisa**

Lisa had just separated from her fiancé, leased 40 acres on a land contract, and began building a two-story straw bale home when she met Jacob. She needed help hauling straw and Jacob was happy to oblige. Since then, they’ve been together for the past twenty years, and Jacob is now a stay-at-home Dad. Lisa makes an hour-plus commute to Charleston, WV for work. During our interview, we sat at the kitchen table, nursing cups of black coffee, while Jacob skinned potatoes with a paring knife for supper. Lisa and Jacob talk often about selling their house, but don’t know if it would be logistically, or emotionally, possible.
Appendix B: IRB Submission and Exemption Notice

I understand the interview (and more broadly the process of compiling oral history) to be a “representation of an experienced reality rather than a realist or authentic account of an objective reality.” Critical and performative ethnographies thus allow the researcher to enter and study fields that are emergent, dynamic, and often implicate bodily action and movement. Importantly, although conversation and talk plays a pivotal role in the interview, embracing critical ethnographic sensibilities also requires pushing against the logocentric bias of favoring speech over other multimodal forms of meaning making. As researchers then, it is important to pay attention to the embodied experience, scents, sights, and sounds of a field. In short, we must acknowledge the multisensory aspects of interviewing and participant observation. This is especially important when attempting to understand domestic ritual, habit, and activity as a confluence of memory and sensory perception.

Ethnographic interviewing is often defined as projects in which researchers have established ongoing relationships that are subject to change and exist as context dependent. In addition, by attending to the affective and sensory aspects of fieldwork, researchers who enter a field embrace the interview as a route to understanding the sensory experiences informing a participant’s life, memory, and experience. In this manner, ethnographer Sarah Pink notes that multisensory interviewing methods can be understood as a quasi-phenomenological approach: “if we treat the interview as a phenomenological event it is more appropriate to use the idea of place-making as a metaphor through which to understand the interview process.” As someone interested in
the phenomenology of dwelling in smaller spaces, Pink’s call for multisensory ethnography resonates with me as a powerful way to study the habits, rhythms, construction, and meaning of smaller spaces as political and aesthetic acts. Attending to multisensory interviewing techniques requires the researcher to consider the ideas, senses, embodied experiences, emotions, and material objects that that comprise the interview as both a space and event.

In this manner, the multisensory interview serves as a place of “heightened reflection” for the researcher. This imperative should have direct implications for the sensibilities and practices that shape the interview. Perhaps most importantly, doing sensory ethnography requires the researcher to think carefully about the type of questions asked. Evoking the sensory aspects of lived experience is often not something that happens by accident; through careful consideration, the ethnographer situates the interview as a space of sensory reflection.

Within the practice of ethnography, this means that interviewing often occurs in the midst of some other social action, “often while the sights and sounds that triggered the question are still fresh in the minds of the researcher and participant.” For this reason ethnographic interviews rely on the skill of the researcher to find and cultivate these moments. Thus, I have decided to situate my interview as largely comprised of nondirective questions given the tendency of this style to allow for a more organic and free-flowing conversation style. As Paul Lindlof and Bryan Taylor note, nondirective questions allow “the subject freedom to define the scope and the terms of his or her answer” to educate and researcher by pointing out the “routines, rituals, artifacts, and
cycles of activity” that mark daily life. Given that my second and third research questions ask how members of the small home movement enact dwelling through habitual, political, and aesthetic action, I hope that this question style will facilitate an open-ended dialogue between my participants and myself about everyday life in smaller homes.

To facilitate conversations that center on how architecture is experienced within the small home movement I rely extensively on grandtour and memorable-tour questions—a type of question that often asks a participant about a “standout” experience such as a turning point in one’s career or the first time someone did something. As a result, I will rely on grandtour questions when introducing a thematic topic, or inquiring about the political or aesthetic significance of smaller homes (see Appendix A: Interview Protocol, questions 1b, 3a, and). The purpose of these questions is to locate thematic points in the conversation and allow the participant time to reflect on his or her experiences.

Another type of nondirective question—the time line question—asks the participant to include a specific temporal grounding for each answer. In some cases—especially when discussing the process of building a smaller home, or when gauging how long it took a participant to navigate local zoning and building codes—it is crucial to have a sense of the duration of these activities. Time line questions are also useful given that they can often work as an impromptu transition to broader biographical questions when studying members of a social movement.
Finally, my interview protocol relies heavily on experience and example questions to ask participants to describe an experience from a first-hand perspective. Most often, I have included this type of questioning as a probe for further inquiry. For instance, in the first set of questions regarding early memories of home, I have included follow-up questions to ask if there are any sights, smells, or tastes that the participant identifies strongly with home. Questions such as these allow the participant to ruminate over this experience and will hopefully provide vivid experiences to understand the relationship of memory and sensory perception to dwelling. As a result, I believe that this type of question will aid in understanding home as a space of domestic activity and memory.

Key to any sense-based ethnography is the fact that interviews must account for the multiple modes of perception that categorize experience. Following Merleau-Ponty’s *Phenomenology of Perception*, I view bodily sensation as the most basic and fundamental unit of perception. The experience of a body in space is qualitatively different from all other objects in space, and as Merleau-Ponty writes “if my arm is resting on the table I should never think of saying that is beside the ashtray in the way in which the ash-tray is beside the telephone.”¹⁰ The whole body, upon this account is thus not reducible to an “assemblage of organs juxtaposed in space” but rather takes its significance through a body image that informs perception and motoric action. This body is thus “no longer seen as the straightforward result of associations established during experience, but a total awareness of my posture in the intersensory world.”¹¹

Sensory ethnography pays credence to this phenomenology in terms of theory, method, and writing. Theoretically, sensory-based approaches to cognition consider how
perceptual modalities such as olfaction, taste, and vision, touch, and proprioception (i.e.,
the ability to intuit the spatial location of body parts) inform a sense of self. This notion
of body image operates as a heuristic to determine possible motoric action as well as the
very nature of perceptual experience. Although scholarship on body image contests the
number of bodily representations available at any given time, most theorists of embodied
perception agree that the body image, simply put, is what allows individuals to gather
knowledge about the world around them and partake in bodily action as an agent-in-the-
world.\(^{12}\) Here, a sensory ethnography requires a theoretical commitment to view
ethnography as an embodied practice of action:

What is undeniable, however, is that the physical presence of the ethnographer
implies not merely a passive physical presence, but an active being-in-the-world.
It implies the sort of sensory action implied by phenomenological accounts of
perception and interpretation.\(^{13}\)

As Chris Tilley notes, this phenomenological character of ethnographic research is
especially true for activities that “require doing rather than saying.”\(^{14}\) Given that I plan on
attending community home-building sessions and other field sites where homes are still
in the process of construction, I value this theoretical commitment as a way to understand
the smaller home as a affect-laden space that creates meaning as the subject channels
what is going on around it a vibrant process of self-conception.\(^{15}\)

In terms of method, sensory-based approaches to ethnography must account for
how participants evoke sensory categories and perceptions in conversation. As I noted
earlier, a primary way this can be accomplished is by designing an interview protocol that
asks specific questions about the smells, tastes, and sounds of a field site. When combined with an intention to capture the subjective, sensory content (qualia) of qualitative research through head, scratch, and fieldnotes, critical ethnographers attend to the complex flows, fragile bonds, and fluid dynamics of symbolic meaning.16

With regard to the domestic realm, Daniel Miller argues that fieldwork in modern western homes necessitates the use of multimodal interview methods to allow informants to reconstruct everyday practice in a phenomenological reflection of what they think they “actually do” within the confines of the private, intimate realm.17 Another salient example in this regard is provided by Sarah Pink’s 2002 study of domestic practices wherein subjects described homemaking in terms of smell, sounds, and practices of doing laundry.18 A sensory inquiry into home is thus not only an attempt to provide, vivid, evocative, or “thick description,” but instead acknowledges that sensory phenomena influence the way in which collective life is organized.19 For these reasons, I will collect audio-visual materials as a compliment to speech-based interviews.

In Doing Visual Ethnography, Sarah Pink argues that the advent of non-representational theories (such as affect theory) demand that researcher’s “re-conceptualize the ways that we think of the role of images in the world and invites an approach to the visual that departs from conventional cultural studies treatments.”20 Vision—and the visual image—mark noteworthy forms of observation since they have historically been codified as an inherently trustworthy form of perception. From a phenomenological point of view, this assumption trends on the absurd since vision relies on other perceptual modalities to make meaning. Most notably, as George Lakoff and
Michael Johnson note, knowing whether an object in your visual field is to the right, left, beside, below, or above you is impossible without complementary proprioceptive feedback.\textsuperscript{21} In addition, as Michael Taussig argues in his study of drawing-as-fieldwork, epistemic bias towards visual artifacts as “proof” elides creative processes of invention needed to \textit{make} a photograph or drawing.\textsuperscript{22} For these reasons, the relationship between seeing and knowing in visual ethnography is by no means straightforward and the photographs, videos, and other images produced, “do not necessarily take on the status of being knowledge about the research question or findings themselves, but rather can be understood as routes to knowledge and tools through which we can encounter and imagine other people’s worlds.”\textsuperscript{23} We can thereby envision visual media as artifacts that help understand how we structure and interact with home as a material, phenomenological, and symbolic environment.

My plan is to incorporate visual artifacts in the following manner. First, I will photograph participant’s homes to catalogue the architectural features of this space. Documenting these spaces visually will also allow me to incorporate figures and images to aid the reader when discussing how the physical features of a given location impact the activities and movements of daily life. In addition, when discussing the vernacular features of an ideal home, I have included probes asking participants to draw out their ideal design to understand these features visually. Finally, many small homebuilders rely on open-source drafting programs (such as \textit{sketch up}) to design their creations. By securing access to these plans, I will be able to compare the distinct architectural features
of each home. This comparative process, should afford a more nuanced understanding of the iconic and vernacular aspects of each home.

I am also especially interested in using visual artifacts as a way to capture the aesthetic aura of self-built housing. I use the term aesthetic aura here in the same sense that Walter Benjamin uses the term when discussing the loss of individuality accompanying the mass production of visual works of art. According to Benjamin, the mechanical reproduction of visual mediums lacks an authentic relation to the viewer, “even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be.”

Here, I am excited to explore the relationship between visual imagery and vernacular building practices in terms of aesthetic aura. As I noted earlier, many proponents of the small home movement frame their decision to build a house as a rejection to the ideologies of mass consumption and mass production that typify contemporary dwelling. In large part, my third research question is motivated by the belief that many members of the small home movement view home as an aesthetic counter-cultural, do-it-yourself (DIY) statement of rejecting materialism for the sake of sustainability. In this manner, these individuals embody what master-craftsman, Christopher Schwartz, terms aesthetic anarchists—“people who work with their hands, own their tools, and seek to live in a world where making something (anything) is the goal of the day.” If members of the small home movement do view their work as a creative act, then arguably the process of building and inhabiting a smaller home can be interpreted as a way to reestablish a historical and nostalgic aura of home as a simple, cultivated, and vernacular space.
Collecting drawings, photographs, and architectural drafts of these small homes will allow me to consider if members of the small home movement frame their creations as a counter statement to a modern mechanical reproduction of the domestic sphere.

My access to participant’s and field sites is largely a byproduct of my past work with regional carpenters and craftsmen who have introduced me to members of the small home movement. In some sense, these men act as gatekeepers who control key sources and avenues of opportunity for the qualitative researcher. Using these gatekeepers as an accesses point to the small home movement, I plan to interview approximately 15-25 participants over the course of this project. The bulk of these interviews will be completed over this summer and all possible field sites are located in central and southwest Ohio.

For this reason, participant observation and interviews collected at these field sites will focus on the ways in which smaller dwellings shape the habits, activities, and rhythms of domestic space. There thus exists an implicit ergonomics of dwelling that is best theorized in terms of non-representational theories of affect. Here, I see this ethnographic inquiry as a compliment to a rhetorical historiography of smaller homes as iconic phenomena. Memories of home are informed by domestic affect as well as larger historical and ideological conditions. Turning to the activity of fieldwork then, interviews collected will incorporate phenomenological sensibilities to examine how the practices associated with smaller homes constitute an affective bloom space of memory. In this way, home is not reducible to memory but exists in practice beyond memory as a group of organic sensory habits. Tracing the impact of these habits necessitates an
appreciation how the biological facts of human existence impact dwelling. To realize a phenomenology of home then is quite different from applying philosophy in the sense of theorems, axioms, and insights. Home is a lived space; it must be studied as such.
Appendix C: Interview Protocol

Opening:

Demographic Questions

Name:

Age:

Location:

Pseudonym:

1. Early Life:
   a. Tell me a little bit about your childhood home(s).
      i. Probe 1: What did the house look like? How would you characterize its architectural style?
      ii. Probe 2: Do you think that the design or layout of this house has shaped the way you view houses today? How so? If not, why not?
      iii. Probe 3: Is there anything else you want to share about your childhood memories of home?
   b. Describe some memories associated with any home you’ve lived in prior to this one?
      i. Probe 1: Could you tell me about some specific memories or periods of time?
      ii. Probe 2: Why do you think these moments are memorable or important to you?
      iii. Probe 3: What kinds of sights, smells, or tastes do you associate with home?
   c. Are there any other stories do you remember being told about your
family’s history or home?
   i. *Probe 1*: In what ways has your family history impacted how you view home?

2. **The Decision to embrace smaller home movement**
   a. When did you first decide to embrace alternative housing practices (e.g., off-grid, home-steading, tiny home, or permaculture)?
      i. *Probe 1*: How long has this been part of your life?
      ii. *Probe 2*: What drew you to the smaller home movement?
   b. How did you decide on the building design and layout?
      i. *Probe 1*: Were there any substantive changes to this design during the process of construction?

3. **Rhythms, Habits, and Homemaking**
   a. Describe any activities that mark daily life in your home.
      i. *Probe 1*: In what ways do these activities shape how you view home and your memory of “being at home”?
      ii. *Probe 2*: Can you give me any other specific examples?
   b. Would you consider any of these activities as habits? If so, describe some of these habits.
      i. *Probe 1*: Describe
      ii. *Probe 2*: Do you think that these habits are a result of the design or layout of your home?
      iii. *Probe 3*: How important are these habits to having a “sense of home”?
   c. If you were to change anything about your current living situation, what would it be?
      i. *Probe 1*: Is there anything that you find inconvenient as a result of your living arrangement?
      ii. *Probe 2*: Have you had to give up any activities as a result of your new lifestyle?

4. **Architectural Features of Smaller Homes and Home Building**
   a. Approximately how long did it take for you to build your home?
      i. *Probe 1*: Do you have any sentimental or special memories in this regard?
      ii. *Probe 2*: Did you encounter any problems that delayed
construction?

iii. Probe 3: If you could offer advice to future small home builders what would you suggest?

b. If you could design and build an ideal house, what would this house look like?
   i. Probe 1: What specific elements would you incorporate into the design?
   ii. Probe 2: Would you mind briefly sketching up this design?
   iii. Probe 3: Would it be about as big as your current house?

5. The Home as Political/Aesthetic action:
   a. In what ways is your decision to occupy a smaller home as a political act?
      i. Probe 1: Why is this important to you?
   b. Do you think most Americans would be better off with a smaller home?
      i. Probe 1 (if yes): Should America embrace smaller and sustainable homes?
      ii. Probe 2 (if no): Why not?
   c. Are there any aspects of your home’s design or layout that were selected
   d. Do you think of the process of building your own home as a creative or artistic process?
      i. Probe 1 (if yes): How so? Could you be more specific?
      ii. Probe 2 (if no): How would you describe it?

6. Closing: As we wrap-up our conversation, I thought we might discuss anything that I have not covered.

Is there anything you would like to share with me that I have missed in our conversation today?
Notes

Preface

3 “Treatment Process.”

Chapter 1

3 Lisa Thompson, Barn Again! Celebrating an American Icon (Smithsonian Institute, 2003), 10.
4 Ken Wysocky, This Old Barn (Greendale, WI: Cotry Books, 1996).
5 Further evidence is offered by the small parallel-arched marks on the face of each beam. Before the invention of the steam saw, boards were hewn by broad-axe, leaving unmistakable horizontal gouges where blade met timber. To this end, lumber within each barn features the small parallel striations of a steam-powered mill.
6 Pole barns are a twentieth century invention: one that sacrifices craftsmanship and durability for speed of construction and economy. With the advent of dimensional lumber, pre-framed roof trussing, the widespread availability of hardware, and power
tools, a team of 3-5 workers could now complete a barn from start to finish in as little as a week.


Chapter 2


4 Greg Dickinson, Carole Blair, and Brian Ott make a similar argument, complete with reference to Simonides, in their edited volume on public memory. However, I take the story of Simondes to be emblematic of both collective memory as well as the distinct architectural practices of the Greek home, which foreshadow larger logics of domination


14 Bill Bryson, *At Home*, 60. Bryson’s theory is, like many studies of home, primarily focused on the development of domesticity among upper-middle class and bourgeoisie homeowners. Although this emphasis is regrettable it is also somewhat unavoidable—very often it was only the upper echelons of society who recorded daily activities and inhabit structures that are still standing today.


21 Madigan, “Gender and the Meaning of Home.”


28 Yi-Fu Tuan, *Space and Place: The Perspective of Experience* (Minneapolis: University of Minnesota Press, 1977), 137.


32 Mallett, “Understanding Home.”

33 Robert Ginsberg, “Meditations on Homelessness and Being at Home: In the form of a

34 In this regard, my use of the word metaphysical is most closely aligned with Martin Heidegger’s reduction of the metaphysical to the most basic question of “why there are things [essents] rather than nothing.” See, Martin Heidegger, An Introduction to Metaphysics, trans. Gregory Fried and Richard Polt (New Haven, CT: Yale University Press, 2014).


36 This quotation is attributed to Le Corbusier himself. See: Ruth Butler and Hester Parr, eds., Mind and Body Spaces: Geographies of Illness, Impairment and Disability, 1 edition (London: Routledge, 1999), 32.


39 For instance, the Great Bed of Ware—mentioned by the likes of William Shakespeare, Lord Byron, and Charles Dickens—was large enough that “Four couples might cozily lie side by side, [sic] And thus without touching each other abide.” See John Gloag, A Social History of Furniture Design: From B.C. 1300 to A.D. 1960 (London: Cassell, 1966), 105. See also, Rybczynski, Home: A Short History, 28.


41 Timiraos, “Why New Homes.”

42 Rybczynski, Home, 161.

43 Rybczynski, Home, 161. Nota Bene: Beecher’s affirmation of modest dwelling should not be interpreted as misplaced romantic idealism but rather as symptomatic of the rise of home economics as a discipline that sought to maximize comfort in the domestic sphere through the systematic, efficient homemaking and practical architectural layout.


47 Susanka and Obolensky, The Not So Big House, 8.


49 Susanka and Obolensky, The Not So Big House, 9.


51 Kahn, Tiny Homes, 67.

52 Arendt views dwelling as the domain of work. Through work, humans craft products
that exist beyond their finite life. This permanence may be contrasted by the domain of labor, which produces products merely for consumption. The difference here is between a banana (that will rot quickly) and a table, which affords a type of permanence given that it will last for many years to come. Arendt notes that this distinction was recognized as early as Locke who differentiates property in terms of that which spoils (the common) and private property (most notably currency which cannot spoil). See: Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1998).

69 Hugh Howard, *Dr. Kimball and Mr. Jefferson*, (Bloomsbury: New York, 2006), 33
54 Hugh Howard, *Dr. Kimball and Mr. Jefferson*.
58 Hugh Howard, *Dr. Kimball and Mr. Jefferson*, 44.
59 Caudill, *Night Comes to the Cumberlands*.
60 Caudill, *Night Comes to the Cumberlands*, 68.

Chapter 3


8 Oppenheimer, “Climatic, Environmental and Human Consequences of the Largest Known Historic Eruption.”

9 Oppenheimer, "Climatic, Enviromental, and Human.”

10 Oppenheimer, "Climatic, Enviromental, and Human.”


14 Deleuze and Guattari, *A Thousand Plateaus*.


18 See Bennett, *Vibrant Matter*.


20 As Bennet writes in her 2004 essay on “thing-power” of objects within a material ecology, “One hallmark of this ‘body materialism’ (as I will call it) is its insistence upon locating the body inside a culture or bio-culture” where things can exert a “material recalctitrance” over Being. See: Jane Bennett, “Thing-Power: Toward an Ecological Materialism,” in *Conference Papers -- American Political Science Association* (Conference Papers -- American Political Science Association, American Political


24 Deleuze and Guattari, A Thousand Plateaus, 6.

25 For more on the image of a taproot as a rhizomatic metaphor see: Deleuze and Guattari, A Thousand Plateaus, 5.

26 Deleuze and Guattari, A Thousand Plateaus, 9.


31 Jane Bennett, for one, refers to this phenomenon as the material recalcitrance of vibrant matter, see Jane Bennet Vibrant Matter; “The Force of Things”; and “Thing-Power.”


34 A keystone species is a species that has a disproportionate impact on an ecosystem. Most keystone species modify environmental conditions and/or are apex predators. See: R.T. Paine, “A Conversation on Refining the Concept of Keystone Species,” Conservation Biology 9, no. 4 (1995): 962-964. See also, chapter 4 (“Tile Saws and Earth ships,” footnote 23.
Although there is broad scientific consensus as to the effects of this new epoch, there is no agreement as to when the Anthropocene began. Some scholars, including Paul Crutzen and Eugene Stoermer, locate its dawn to roughly coincide with the industrial revolution of the late 18th century as western logics of domination fused with heavy manufacturing. At the other end of the spectrum, soil ecologists Giacomo Certini and Riccardo Scalenghe argue that the Anthropocene is roughly coteminous with the most recent geological epoch, the Holocene, marking the end of the last ice-age some 11,700 years ago. See: Paul J. Crutzen and Eugene F. Stoermer, “The ‘Anthropocene,’” Global Change Newsletter 41 (2000): 17–18; Giacomo Certini and Riccardo Scalenghe, “Holocene as Anthropocene,” Science 349, no. 6245 (July 17, 2015): 246–246, doi:10.1126/science.349.6245.246-a.


This analogy relies on the fact that human/nonhuman history of earth is at an approximate 1/690,000 ratio (i.e., 13,800,000/200,000). For more on the relationship between Deep Time and Ecology see: Morris Conway, “Ecology in Deep Time,” Trends in Ecological Evolution, 10, no. 7 (July 1995): 290-4.


Bowden, “An Environmental Sociology for the Anthropocene,” 53.


Bachelard, The Poetics of Space, xxi.


50 Stewart, *Ordinary Affects*, 1.
51 Stewart, *Ordinary Affects*, 86, 126.
60 Haraway, 8.
62 Bennett, *Vibrant Matter*, viii.
69 Martin Heidegger, *Being and Time*.
Chapter 4

3 The Buffalo Creek mine disaster unleashed over 130 million gallons of coal slurry waste on 16 mining towns in February of 1972 after federal mine inspectors had negligently labeled the dam to be operational. See:
4 During the Battle of Blair Mountain over 1,000 million rounds were fired between a 10,000 strong militia of coal miners and a force of strike-breakers and local law enforcement hired by West Virginia coal companies.
5 A yellow-dog contract refers to a type of contract non-union workers (known colloquially as “scabs”) were often forced to sign in which the worker promises not to join a union.
9 The play on dress and the practice of dressage draws on Michel Foucault’s exploration of dressage (i.e., the physical manipulation of a body towards productive ends) within Discipline and Punish. Here, Foucault traces the evolution from labor to dressage along


13 Yi-Fu Tuan, Space and Place (Minneapolis: University of Minnesota Press, 1977).


16 Pink and Mackey, "Video and a Sense,", 2.7.


19 Merleau-Ponty, Phenomenology of Perception, 114.


26 Richardson-Ngwenya, “Performing a More-Than,” 294.

27 Richardson-Ngwenya, “Performing a More Than,” 296.

28 Roger Sanjek, “A Vocabulary for Fieldnotes.”

Roger Sanjek provides a tripartite vocabulary for understanding ethnographic note taking. Headnotes refer to the thoughts, musings, and ruminations that stay with the researcher throughout the duration of an ethnographic project. By contrast, scratch notes are the abbreviated jottings produced during interviews and participant observation. After the interview the ethnographer is then able to draw from her scratch notes to complete a more descriptive set of fieldnotes. See: Roger Sanjek, “A Vocabulary for Fieldnotes.”


Interestingly, Ngwenya comes to a similar conclusion as a result of her work in Barbados: “. . . but with hindsight, I would not have walked around with a video camera in hand. Looking back at the footage now, it does seem rather embarrassing.” See: Richardson-Ngwenya, “Performing a More Than,” 297.


Chapter 5

1 The tallest building in West Virginia is the state capital, standing 295 feet tall. By comparison, “Big Muskie”—the 27,000,000-pound behemoth operated by the Central Ohio Coal Company—had a span of 333 feet and six inches and was the largest dragline excavator ever produced. See: David Carter, “The Big Muskie Bucket and Miners’ Memorial Park,” website. January, 2, 2017, https://www.noblecountyohio.com/muskie.html.


12 The term “primitive” when used in conjunction with bow-making has less to do with the indigenous people who used them than it does with the development of compound, pulley-based bows; all bows, regardless of origin, are considered primitive unless they give the hunter a mechanical advantage using pulleys and cams. Of course, as with any use of “primitive” in conjunction with the long history of indigenous colonization, there is a risk of fetishizing the idea of “primitive bow hunting” as a kind of projection of white colonial imagination.


14 “Ohio’s forests—then and now,” Audubon Adventures (Ohio Series), EPA, (Online) http://www.epa.state.oh.us/Portals/42/documents/AA%20forests%20fixed.pdf

15 Throughout my project I rely on regional geographic surveys, oral and written histories as a supplement to my experiences in Appalachian Ohio. The following coal statistic was borrowed from Frank Kenney’s *Athens County: A Physical and Cultural Atlas* (Athens, OH: Ohio University Cartographic Center, 1987), 12. The revenue from the logging industry was furnished by the Ohio State University’s “Agricultural and Natural Resources Fact Sheet.” See Eric McConnell and Hal Kneen, “Athens County’s Forest Economy,” The Ohio State University, https://ohiowood.osu.edu/images/F_99_13_Athens.pdf.


17 Harry Caudill, “Night Comes to the Cumberlands: A Biography of a Depressed Place,” (Boston: Little Brown, 1963), 65.


Qtd. in Kahn’s, “Forrest Service and Appalachia,” 89.

Kahn, “Forrest Service and Appalachia,” 87.

Kahn, “Forrest Service and Appalachia,” 86.


Chapter 6

1 In the following chapter I theorize home as a Deep Ecology given my participant’s use of Deep Ecological premises including (1) a rejection of “surface” environmental issues, and (2) a commitment to treat nonhuman lifeform with intrinsic moral worth. Yet, in recent years, Deep Ecological perspectives have come under criticism for its commitment to human population control. As Arne Naess writes in his 1973 essay, “The Shallow of the Deep, Long-Range Ecology Movement,” “The flourishing of human life and cultures is compatible with a substantially smaller human population. The flourishing of nonhuman life requires a smaller human population (96).” However, as Naess himself notes later in the article, “People in the materially richest countries cannot be expected to reduce their excessive interference with the nonhuman world overnight. The stabilization and reduction of the human population will take time” (98). Given Naess’s commitment to non-violence and his own instance that Deep Ecology should be treated as a form of dialogism rather than a coherent philosophy, I’ve embraced a Deep Ecology as a productive theoretic lens for this chapter. To this end, I’ve turned to Deep Ecology given its unique rejection of a dualistic animal/human ethic. If anything, I believe that Naess’s original discussion of population control fails to consideration the profound differences between a population and consumption. For this reason, I see this chapter as an attempt to reorient Deep Ecological premises away from discussion and towards a more modern problem of overconsumption. See: Arne Naess, “The Shallow of the Deep, Long-Range Ecology Movement,” Inquiry 16 (1973): 95-100.

2 As defined by Jennifer Adams, “modern homesteading is a movement comprised of loosely organized groups of individuals who have chosen to reject consumerism and mainstream American lifestyles and instead strive to be as self-reliant as possible in


8 Lefebvre, Rhythmanalysis, 25.

9 For the concept of an “earth other” as a more-than-human rendition of bieng see: Travis Brisini and Jake Simmons, “Posthuman Relations in Performance Studies.”

10 Jane Bennett, Vibrant Matter, 42.


16 My use “sublime” here as a direct allusion to aesthetic writings of Arthur Schopenhauer and other 19th century German Idealists. The notion of a “sublime aesthetic,” per the likes of Schilling, Schopenhauer, and Nietzsche may be characterized as an experience of vastness and magnitude that is tinged with fear. Throughout my dissertation, I return to the notion of a sublime aesthetic as one of the ways my participants framed their desire to build homes in a vernacular tradition. See: Arthur Schopenhauer, “The World as Will and Representation,” in Aesthetics: A Comprehensive Anthology, ed. Steven Cahn and Aaron Meskin (New York: Blackwell Publishing, 2008), 193-216.

17 Haraway, The Companion Species Manifesto, 8.

18 This imagery was something I’ve had stuck in my head ever since I read Louise Erdrich’s poem “Advice to Myself”:

Leave the dishes. . . Don’t patch anything. Don’t mend. Buy safety pins. Don’t even sew on a button. . . Accept new forms of life and talk to the dead who float in through the screened windows, who collect patiently on the tops of food jars and books. Don’t recycle the mail, don’t read it, don’t read anything except what destroys the insulation between yourself and your experience or what pulls down or what strikes at or what shatters this ruse you call necessity.

On the day I interviewed Angie, we shared lunch at her farm. Over lunch we joked about


24 Aspens are a hearty species that can regenerate from the base of a stump. For this reason, Aspen trees were some of the first species of wood to be coppiced (i.e., pruned at the stump for the purposes of regrowth) by humans for timber. In fact, if you’ve ever seen a trunk with an uncharacteristic curve near the base, chances are that it was coppiced in a past life.


26 See: Oliver Hedge, Garbage Warrior, Open Eye Media, 2007.

27 Beavers are another keystone species known to build ecosystem-altering dwellings. A keystone species is a species that has a disproportionate impact on an ecosystem. Most keystone species modify environmental conditions and/or are apex predators. See: R.T. Paine, “A Conversation on Refining the Concept of Keystone Species,” Conservation Biology 9, no. 4 (1995): 962-964.

28 Oliver Hedge, Garbage Warrior.


34 Merle Haggard, “Momma Tried,” recorded May 9, 1968 on Momma Tried: You’ll Never Love Me Now, Capital 2219, 33 ½ rpm.


Chapter 7

1 Lefebvre, Rhythmanalysis, 61.
3 Oppenheimer famously remembered these words as he watched the atomic mushroom cloud codenamed “Trinity” unfurl over southwest New Mexico in July of 1945. See: James Temperton, “‘Now I Am Become Death, the Destroyer of Worlds’? The Story of Oppenheimer’s Infamous Quote,” WIRED UK, accessed April 10, 2017, http://www.wired.co.uk/article/manhattan-project-robert-oppenheimer.
8 An excellent summary of the process of petrification is found in Paulo Charraudas and Philippe Sosnowska’s published proceedings “Petrification’ of Brussels Architecture: An attempted explanation between construction methods, supply of building materials, and social context (13th-17th centuries),” International Conference on Cultural Heritage


10 The ship of Theseus represents a classical paradox regarding the nature of “things.” According to legend, Theseus posed the following question as recorded by the Greek Essayist Plutarch: More modern incarnations of this paradox include Jacotot’s knife: If the family knife, passed down from generation to generation has had both handle and blade replaced—is it still the family knife? I borrow this example from the French folk tale of Jeannot’s knife first appearing in print in the Backwoods Edinburgh Magazine. See “Dumas in his Curricle,” Backwood’s Edinburgh Magazine (Jan. 1844) LV, no. CCCXLI: 351.

11 As I’ve detailed chapters in 2 and 3, theories of architecture and dwelling have historically theorized the meaning of home in terms of a Form Content distinction. This representational account would appear to make sense on both an ecological and aesthetic grounds: as matter is organized to create domestic space (i.e., the “Form”), it creates liminal space for affective response (i.e., the “Content”) as we consume home. Moreover, as an objects Form is lost to degradation, the content of our response shifts accordingly. A theory of home based in Form/Content, however, does not take into consideration how vibrant matter may shift the affects and relations of domestic space within a material ecology. Domestic object and rhythms within a material ecology, decay, blossom, or petrify over time in ways that make it hard to charge change as a temporal process. Without this temporality, causation is harder to divine and, as a result, it is increasingly hard to parse out their meaning in terms of “Form” or “Content.” See: Sean Gleason, “Trashing Home,” in Stories of Home, ed Chawla and Holman Jones, Stories of Home, 149–59.


13 A thing in itself (TiTh) refers the “actual” properties of an object or item. In his synthesis of Hume’s empiricism and Descartes rationalism, Kant proposed that, given the conditions of human perception detailed within his transcendental aesthetic it is impossible to determine the actual state of things in themselves. Although this “noumenal” realm is, according to Kant, beyond our reach, analytic philosophy has historically attempted to discern the objective nature of objects through a “predicate calculus” that lists the properties of an item, statement, or thought and then tries to assess its overall value using formal systems of logic. See: Emmanuel Kant, Critique of Pure Reason, trans. Norman Kemp Smith (New York: Palgrave Macmillan, 2007).

14 Here my thinking about home is also influenced by Emmanuel Kant’s transcendental aesthetic contained within his Critique of Pure Reason. Here, Kant attempts to understand the universal conditions of human perception as a means by which to limn out an underlying ontology of being. Famously, Kant’s writings on the transcendental aesthetic posit the human experience of time and space as intrinsic to any speculative metaphysics (the grand-catch of this conclusion is Kant’s resignation that due to the universal
influence of time and space in judgement. We can never know the noumenal realm of "things-in-themselves" and any knowledge accrued in the world is knowledge restricted to the phenomenal realm of lived experience.) Thus, I read Kant and Nietzsche’s projects simultaneously as investigations into the nature of a phenomenal worldhood—a kind of proto-phenomenological investigation of the conditions of human perception along time. 


Regarding Locke’s definition of private property see chapter five of his Second Treatise of Government, “The Labour of his Body, and the Work of his Hands, we may say are properly his. Whatevsoever then he removes out of the State that Nature hath provided, and left it in, he hath mixed his Labour with, and joined to it something that is his own, and thereby makes it his Property. It being by him removed from the common state nature placed it, it hath by his labour something annexed to it, that excludes the common right of other Men.” John Locke, Second Treatise of Government (Watchmaker Publishing, 2011).


28 Brian Izzard, “HMS Replica; Nelson’s Flagship Victory Took Six Years And A Forest Of Oak To Build But Her Battering At Trafalgar Left us with Only 20% Of The Original,” Sunday Express, October 9, 2005.

Chapter 8
2 The first figure (1,115) was reported in the ODNR’s 2017 report “History of Coal Mining.” The second figure (11) appeared Ohio Coal Associations 2010 “Interactive Ohio Map.” See: “Interactive Ohio Map,” Ohio Coal Association, accessed February 13, 2017 (Online), http://www.ohiocoal.com/learning-center/interactive-ohio-map.php#.
8 Bennett, Vibrant Matter.
10 Carole Blair and Neil Michel, “Commemorating in the theme park zone: Reading the Astronauts Memorial,” in At the intersection: Cultural studies and rhetorical studies, ed.
by T. Rosteck (New York: The Guilford Press, 1999), 29-83; 37. (italics in original)


12 As discussed by French philosopher Louis Althusser ideological apparatuses consist of institutions (e.g., schools, museums, and religion) that are formerly outside of state control, yet simultaneously “hail” (i.e., interpolate) subjects through patterns of action. See: Louis Althusser, Ideology and Ideological State Apparatuses (Notes Towards an Investigation), in Lenin and Philosophy and Other Essays (Monthly Review Press, 1971), accessed online at https://www.marxists.org/reference/archive/althusser/1970/ideology.htm.

13 Lefebvre, The Production of Space, 69.


Appendix B

1 The name of this intentional community has been changed as a condition of anonymity.


3 Sarah Pink uses the term multimodal ethnography as a shorthand for considering the multiple ways to address ethnographic inquiry as a embodied, sensory practice of perception. See Sarah Pink, Doing Sensory Ethnography (London: Sage Publishing, 2009).

4 Pink, Doing Sensory Ethnography, 83.

5 Pink, Doing Sensory Ethnography, 86.


7 Lindlof and Taylor, Qualitative Communication Research.

8 Lindlof and Taylor, Qualitative Communication Research, 203.

9 As Lindlof and Taylor note, time line questions are “well suited for studying the participant’s biographical self or the history of a social collective.” See Lindlof and Taylor, Qualitative Communication Research, 205.


11 Merleau-Ponty, Phenomenology of Perception, 114.

12 A exemplary review of scholarship on the phenomenological body image is provided by Brian O’Shaughnessy’s, “Proprioception and the Body Image,” in The Body and the Self, ed. Jose Bermudez (Boston: MIT, 1998).


Steward, *Ordinary Affects*, 79.

Roger Sanjek provides a tripartite vocabulary for understanding ethnographic note taking. **Headnotes** refer to the thoughts, musings, and ruminations that stay with the researcher throughout the duration of an ethnographic project. By contrast, **scratchnotes** are the abbreviated jottings produced during interviews and participant observation. After the interview the ethnographer is then able to draw from her scratchnotes to complete a more descriptive set of fieldnotes. See: Roger Sanjek, “A Vocabulary for Fieldnotes,” In *Fieldnotes: The Makings of Anthropology*, ed. Roger Sanjek (Ithaca: Cornell University Press, 1990): 92-136.


“But over and beyond our memories, the house we were born into is physically
inscribed in us. It is a group of organic habits.” See: Bachelard, The Poetics of Space, 18.