John and I decided we’d chance making it across the marsh with somewhat dry feet. We’d been zigzagging our way through a scrubby woods, bypassing people’s encampments—empty now in the colder weather—and walking over low hills; bulldozed piles of soft, soggy dirt. We ducked under low, spreading branches of magnificent oaks and struggled through thickets of buckthorn. In some places brambles made it impossible to pass. We were now facing a wetland choked with reed canary grass, and though we could see ice over much of it, we weren’t sure how much had thawed and how much water we’d encounter if the ice didn’t hold us.

It didn’t hold. The marsh wasn’t deep, but we went in over our ankles. By the time we made it across the boggy space to the vast, crumbling parking lot where we’d left a car, our boots were coated in mud, our feet swimming in wet grit. It was a bonding experience. Now we each knew what the other was made of. We were not afraid of some mud, brambles, or chance encounters with people without anywhere else to be—all of which are possible to meet in spaces behind buildings, between highways, alongside stormwater-entrenched creeks.
Because that’s where both of us wanted to be. At least, that’s what I was thinking when I followed John across that marsh.

Why I wanted to be there is the purpose of this book. Passing by empty lots, I watch plastic bags assembled, flapping at me, and wonder what they are trying to say. I take note of the small broadleaf plantain and yellow cone-headed pineapple weed pushing up through the packed earth of a street terrace and wonder what story they are telling. My attention on these overlooked and disconnected spaces is, for me, part of a long-term exploration of environmental networks—the relationships connecting people and other beings—and the stories we use to narrate those relationships into existence and maintain them over time.¹

In many such spaces, our stories are just too simple. I think about the small patch of land between sidewalk and road that I cross every day as I leave my house. I’d spent some time there, for a while, shunning grass and trying to coax along a variety of plants—not weeding too much but kicking back at any one plant that decided to make the place its own. I was in there, palavering with the daylilies, coaxing them to move over, not sure who or what else for—but please, just share, for Chrissake—and noting the path through them made by the neighbors on their way to the bus stop, its own kind of lily control. Maybe I should stop worrying about the lilies, I wondered. What else might happen in this space if I let it? Or what if I brought in some other things with their own ideas?

Lurking under this conversation were “the rules” from the city. You can’t grow too high, you know, or you might block visibility for traffic. No fencing or staking that might trip up folks making their way home in the dark. The space has a job to do: separating the road and the sidewalk, a temporary holding space for snow and maybe trash bins—and no idiosyncrasies should interfere with those primary functions.

But despite that, under the radar, I was holding raves, inviting in the riffraff—that is, until the precarity of it all came to the fore. In a day, the fruits of all my negotiations were buried deep in chunks of asphalt and concrete as the city rebuilt the road. Months later, city workers pulled off the concrete then laid topsoil and spread grass seed. I believe it included three varieties of Kentucky bluegrass, 25
percent creeping red or Chewings fescue, and a couple improved varieties of a turf-type perennial—maybe ryegrass. Which is all well and good, but really, I was looking for a different conversation. And anyway, those intrepid lilies (*Hemerocallis fulva*, for those who care) came roaring back. So I brought over some other things—a yarrow, a sedum or two—and we were at it again. I’d wondered what might happen if I could cut a small notch in the concrete sidewalk to let in a bit more rain runoff. And how tall is that redbud seedling going to get before the city cuts it down?

Across the street it’s a different story. The neighbor mows, removing anything that isn’t grass, and those chosen grass varieties are performing. They get nicely raked. They are having their own conversation, though it’s not enough to pull me across the street to join.

For me, spaces like these, put to work in a city, beckon. In part, the draw is related to what Karan Barad means when she writes, “the void is not nothing but a desiring orientation toward being/becoming, flush with yearning and innumerable imaginings of what could be/might yet have been.”

I’m interested in the yearning, which I feel and act on, as well as the energy expended and the politics of keeping certain spaces so policed and “empty.” Those politics involve an active process—an “orphanning,” as I’ve come to call it—that disconnects and disappears space by minimizing ecological, social, and other relationships. I want to catalog the forces at work and the resources spent on creating and maintaining orphaned space and expose what this purposeful disciplining of space costs us. Voids, marginalia, empty spaces must be created and maintained . . . a process often unquestioned. But as Barad explains, “The question of absence is as political as that of presence. When has absence ever been an absolute givenness? Is it not always a question of what is seen, acknowledged, and counted as present, and for whom?” The void has long been a “crafty colonialist apparatus,” Barad reminds us, conveniently couched in categories like “uncivilized” or “virgin” to justify all kinds of appropriation. We can add “vacant” and “infrastructure” and “open” to that list.

Our culture normalizes land as a commodity, something anonymous, and bought and sold with infinite possible futures. There is too little attention to the past and too narrow an imagination for the
future. We struggle even to fully embrace the complex natural ecologies at play in space, let alone the role of history. To maintain this anonymity, we actively orphan.

I came to the word “orphaned” after a long search for language to capture the widespread processes of disconnection and disciplining of space that I saw everywhere, often in the service of infrastructure.

Figure 1.1 The maintenance of orphaned space is always active and continuous, implemented through the severing and minimization of ecological, social, and other relationships. (Photo by the author.)
Although often used to refer to someone who has lost their parents, this flexible word also refers to “a thing abandoned, forgotten, destitute, and separated from others of its kind,” according to the *Oxford English Dictionary*. The condition of being orphaned can refer not only to humans who have lost parents but also to animals who have lost caretakers, to umbrellas that have lost owners, to cars for which manufacturers no longer make parts, and, I suggest, to territory held in isolation and stasis or with diminished connectivity. Some might worry the term anthropomorphizes, and perhaps that is not, generously speaking, outside my intent. The opportunity we have in taking a hard look at the diversity and ubiquity of these spaces around us is similar to the exploration by Balayannis and Garnett of chemicals as kin. The chemicals we create, they point out, are dangerous but also sustaining. Polarized approaches to categorizing them as either beneficial or dangerous mean we make too little of their material politics. The authors refuse dualistic notions of human-made chemicals in favor of more complex processes of negotiation with chemicals as both enabling and harmful.

For me, orphaning similarly refuses categorization as either good or bad and insists we embrace orphaned space as a product of our own activities. Orphaned spaces do important work, but with uneven and often harmful geographies. This embrace is not necessarily a parental one, but it does suggest familial relations and a two-way relationship of caring with the potential for feelings of transcendence, for love. The term “orphaned” involves acknowledgment, responsibility, and leaning into the idea of belonging—that how we relate to orphaned space matters because we belong to each other. We abandon at our peril. The multitude of orphaned spaces—and they represent a tremendous amount of acreage, as I will explain—is being routinely produced and maintained at a significant cost. Such spaces deserve focus not only because they represent a large area and cost to maintain but also because of lost opportunities.

Marc Augé uses the term “non-place” to refer to spaces defined only by the passing through of individuals, lacking history or meaning and in which we spend an ever-increasing portion of our lives. Perhaps most familiarly, we recognize empty space as the result of ne-
glect, a failure of planning creating vacant lots, “marginalia,” and “terrain vague.”

Deindustrialization, redlining, population shifts, and the 2008 financial meltdown are some of the drivers commonly used to explain “empty” spaces in our towns and cities. Looking across the U.S. Midwest, where I live, cities like Saginaw, Michigan, have half the population today than they had 60 years ago. Cleveland lost nearly two-thirds of its population between 1950 and 2010. Detroit, in recent years, had over 90,000 vacant lots. And in a post-COVID-19 world, that trend has only increased as people struggle economically or take advantage of remote work to seek greater social distance outside concentrated urban areas.

There are so many of these vacant spaces that in many towns, their presence has become impossible to ignore and is the focus of emerging conversations around “urban greening” and “place making,” for example.

Detroit has a new city blueprint focused on vacant land transformation, Buffalo is studying distributed green infrastructure to filter stormwater, Milwaukee is funding pocket parks, and Atlanta is investing in a 22-mile urban trail system—the Belt-Line—established on the site of a derelict railroad.

But there’s much more to be said about orphaned space. While land managers embrace green planning, the uneven geographies of species diversity and pollution reveal how spaces are orphaned along lines of race and privilege. Such space is an environmental justice frontier—an opportunity for all of us to redefine ourselves as fairly treated citizens of a heterogeneous, diverse, connected world. I’m interested in the range of the impetuses of orphaning, the energy, practices, and reigning ideology keeping them cut off from living connections as well as from meaning and memory. Conversations about vacant land extend well beyond urban planning.

The land under our feet has a history. All of it. Consider the expropriation of land from tribal nations. The 1862 Morrill Act, for example, transferred almost 80,000 parcels equaling over 10 million acres of Indigenous lands across the country to fund the endowments of some 52 land-grant universities. It was a violence-backed transfer that still produces wealth for those institutions today. Or think about Ruth Wilson Gilmore’s writing on mass incarceration and “forgotten places.” She conceptualizes a single, though spatially
discontinuous, abandoned region consisting of places where prisoners come from (urban neighborhoods of color) and where prisons are built (former agricultural lands). She exposes the interconnectivity of these urban and rural places in her analysis of how the state, facing crises of legitimacy and finance, invested in mass incarceration to deal with “surplus” populations and land.7

Building awareness of how such forces shape land use, and the work of searching out more specific narratives relevant to any orphaned space, are key exercises in “resisting the void.” There’s often nothing unintentional about orphaning. Such spaces have purpose. They are managed to disappear—streamlined as a piece of our maintenance infrastructure or dedicated to a single function, like street terraces and rights-of-way. Other kinds of orphans exist as the apparent accidental appropriation of space by pollution such that it becomes single function by being toxic to any kinds of association. When the boundaries maintaining the orphan are breached, who ventures in and why? What new relationships emerge? For sure, nature abhors a vacuum, but coexistence is nothing to take for granted. How do decisions get made? Who cares?

The area around the marsh John and I visited has changed dramatically since our walk. An Amazon distribution center was proposed for one of the crumbling properties, including a surface parking lot to handle 700 cars. A city-adopted neighborhood plan had this space designated for “mixed housing,” some of which would welcome lower-income folks to be near the green open space (which, as a designated wetland, at this point can’t be built on by law). People contributing to the plan envisioned walking paths, pollinator sanctuaries, urban gardens, and installations that would filter runoff from the nearby streets, thus cleaning the water entering the wetland. But it turned out that even while the city formally recognized the plan, rezoning from “light industrial” was never pursued. A lawyer for Amazon slipped in an almost-missed request for a permit to build parking: acres of impervious asphalt adjacent to the wetland and a lot more through traffic in John’s neighborhood as drivers for Amazon rush to deliver goods. Neighbors got wind of the plans at the last minute and showed up at a city meeting, which created delays, but ultimately, the assistant city attorney said the proposed uses
of that parcel were all “permitted.” No matter the years-long neighborhood planning process and city-approved neighborhood plan. Constitutional protections for property owners remain sacrosanct, and no city wants to face a lawsuit on those grounds. Our city, like so many, relies on “growth” defined by development and increasing
rents. And a job with Amazon looks pretty good to a lot of people living nearby.

That neighborhood plan reflected a wealth of other ideas. John was excited about expanding ecological connectivity and designing mixed-generational housing and commercial spaces to feature a nearby stream and a small pond. We also talked about different ways to commemorate the history of the place—the tribes who’ve lived here, the farm that was here for generations. Other ideas included wildlife habitat and earth and water installations that clean stormwater. People in this neighborhood have less green space per capita than in surrounding neighborhoods, and the idea of creating welcoming outdoor spaces that would serve them close to home was compelling.

In even the most desolate orphaned spaces, more activity is going on than might be apparent at first. Things have a way of poking up and dropping in. It’s not easy to predict—orphans are vacuums for new relationships, pulling in people with nowhere else to go, trash, sedimented layers of dust, bee poop, pollen, car exhaust, mercury, plastic detritus, and so on. All this stuff starts to matter, to build connections. This is why orphaning is often a very active process, denying relationships that want to happen.

Multiple forces bring orphaned spaces into focus. They are always part of a larger story, produced by specific patterns of urbanization and catalyzed into our awareness by climate change, pandemics, financial crises, and overwhelmed infrastructure. Orphaned spaces become visible as they fill with people who can’t afford a place to live, developers looking for new spaces to build, or urban managers trying to solve infrastructure challenges regarding flooding, urban heat islands, food insecurity, and public health. All this is an opportunity to rethink our personal relationships to a vast quantity of public land that falls in a shadow area between private property and open-access space. Green infrastructure and “nature-based” solutions are recent developments in ways to think about and expand the uses for such space. But while approaches like these can be a positive addition to urban planning, they are not enough and, in fact, can be damaging. Green infrastructure projects can be driven by “outside-in” planning, with a community of experts making decisions about how
space is managed with only superficial input from residents nearby. And the links between green space development and gentrification are damning.⁹

This book is about the orphaning of space and also the work of people who resist orphaning processes. They gain access to orphaned space in different ways, a combination of following the rules and bending them. Connections are built and new relationships emerge from their work, which I describe as a kind of radical caring. It’s work that builds on itself as “empty” spaces become charged with new connections and characters in a shared narrative.

The emergence of a network—an assemblage of new characters and relationships that can manifest once active orphaning is halted, even partially—is a particular story, always driven by history, as well as a collection of different agents and relationships that flow in once the seal is broken. Nothing can be taken for granted about who and what will come and be welcomed. Influences from near and far, from long ago and recent times, must be considered and treated with care.

I feel just this sentiment in Louise Erdrich’s novel *The Night Watchman*, in which she describes how the character Zhaanat, a keeper of knowledge, navigates her world: “Because everything was alive, responsive in its own way, capable of being hurt in its own way, capable of punishment in its own way, Zhaanat’s thinking was built on treating everything around her with great care.”¹⁰

This sense of care feels important right now, in a world full of surprises and uncertainty and under pressure from the relentless human drive to build and grow. What opportunities might lie right around us? Who is taking the time to slow down and listen? What do they hear?

John is a nurse, though he retired in 2019. He’s also an artist, and in that way, he is like others I have followed into orphaned space. Compelled by widely ranging visions and ambitions, trained to observe what others don’t, and encouraged to pursue knowledge across disciplines that might help realize a vision, artists are well equipped to question accepted uses of space and take advantage of unexpected events or ruptures in accepted ways of doing things. In many urban places, managers struggle with a convergence of aging and overwhelmed infrastructures, growing or shrinking numbers of residents,
and unpredictable “shocks” from extreme weather or other events provoked by climate change. Cracks have appeared. Bridges crumble, sewers overflow, treeless streets bake and melt. Suddenly, taken-for-granted infrastructures, like Heidegger’s tools, become visible as they fail. As local administrations scramble to cope, they have opened up opportunities for newcomers, including artists, to enter and experiment in once-disciplined spaces.

As editor of Ecological Restoration journal in 2007, I read an article in the New York Times describing an exhibit, curated by artist Lillian Ball, that showcased restoration work creatively engaging with people in communities afflicted by polluted land and water. I had prided myself on publishing a cross section of articles by scientists and practitioners but had not before considered the role of artists in the work of restoring degraded land. I was particularly compelled by how the artists relied on ecological science but equally centered history, meaning, and cultural legacy—elements all too often missing in ecological restoration projects. I reached out to Lillian and invited her to publish a piece in the journal, which was the beginning of an enormous expansion in my thinking about how we relate to the world around us.

As I learned more about the legacies of environmental art and became more familiar with ongoing projects, though, I struggled to describe the breadth of many projects. I failed frequently with readers and audience members who seemed to see such work as urban planning with good visuals. Eventually I realized it was not only the spaces that were overlooked and undervalued; it was also the labor of connecting them; building caring relationships. Understanding this led me to one of the most compelling artists to bring orphaned space into focus: Mierle Laderman Ukeles.

Ukeles’s work, encapsulated as “Maintenance Art,” was all about undervalued labor. In Washing/Tracks/Maintenance: Outside, 1973, Ukeles scrubbed the steps and floors of the Wadsworth Atheneum in Hartford, Connecticut, in four-hour shifts. Visitors, forced to step around her work, were confronted with her kneeling figure, jeans damp, arms furiously scrubbing. She put on display the labor of cleaning and maintenance—so critical to everyday functioning at the museum and so typically hidden and denigrated.
In her Manifesto for Maintenance Art 1969!, a four-page proposal that would frame her work for decades, she wrote:

I am an artist. I am a woman. I am a wife. I am a mother (random order).

I do a hell of a lot of washing, cleaning, cooking, renewing, supporting, preserving, etc. Also, (up to now separately) I “do” Art.

Now, I will simply do these maintenance everyday things and flush them up to consciousness, exhibit them, as Art.

Ukeles rejected the experience of being seen as a serious artist one day and ignored the next as a mother pushing a baby carriage down the street.

Maintenance is a drag; it takes all the fucking time (lit.) The mind boggles and chafes at the boredom. The culture confers lousy status on maintenance jobs= minimum wages, housewives=no pay.

Ukeles described a societal distinction between “Development,” the labor of “pure individual creation,” and that of “Maintenance,” or “keeping the dust off the pure individual creation”—and then rejected it. She proposed that “the exhibition of Maintenance Art, ‘CARE,’ would zero in on pure maintenance, exhibit it as contemporary art, and yield, by utter opposition, clarity of issues.”

Ukeles’s challenge to this separation of the labor of caretaking from that of art making formed the backbone of her work for decades, frequently in collaboration with the New York Sanitation Department. In Touch Sanitation, 1979–1980, she spent a year shaking hands with 8,500 city sanitation employees, saying to each one, “Thank you for keeping New York City alive.” As part of this work, she was also an advocate, exhibiting the labor of maintenance and calling attention to degraded and degrading working conditions for maintenance workers.
Ukeles’s interventions were not those of a benevolent artist shining a light on the invisible worker, though. She aimed to expose us, the audience, to how much we depend on this work, yet shun those who do it. As she wrote in her manifesto, her work sought to engage a “flushing up into consciousness” the care work required to keep us going. Social Mirror (1983), consisting of mirror-clad garbage trucks, made the labor of maintenance hypervisible, the flashy trucks confronting viewers with their role as producers of waste, and demanding they reflect on the task of managing it.¹⁵

Her work reminds me of a passage in Wendell Berry’s Hidden Wound, a book he wrote as he struggled to come to terms with the racist culture in which he grew up. As part of his navigation of the impacts of racism on his own soul, “as complex and deep in my flesh as blood and nerves,” Berry zeroed in on the price of a white people’s drive to shun and denigrate the labor of its own maintenance: “The notion that one is too good to do what it is necessary for somebody to do is always weakening. The unwillingness, or the inability, to dirty one’s hands in one’s own service is a serious flaw of character. But in a society, that sense of superiority can cut off a whole race from its most necessary experience.”¹⁶

I first read that quote decades ago, and it comes into my mind often. What does Berry mean by “necessary”? I eventually came to see a connection between this idea of the psychic cost of shunning the “necessary experience” of caring for oneself and the feminism of environmental artists, like Ukeles, whose work gestures to the undervalued work of caretaking.¹⁷ In an article for Art Forum in 1992, Ukeles extended her thinking about the labor of maintenance to land, describing New York City municipal landfills as abstract symbols of the overall “City as Authority” in tension with local people’s needs for autonomy and places where they feel comfortable. “In this vacuum between the City’s landfills and local places’ distressed Faces, I see a rich, awesome Zone, highly charged and vibrating, awaiting the entry of Art,” she wrote. Ukeles described plans to use the landfills to reflect on gendered images of Earth, including Earth as “Virgin,” forever fresh and a source of reverent delight, and as “Whore,” offering endless access and then “an endless sinkhole for receiving the remains, the unwanted and the despised.”¹⁸
Her brilliant insight challenging the distinction between labor revered as a source of transcendence and that which is denigrated as maintenance work helped me conceptualize orphanging. It takes effort to sense what is systematically hidden, to reconceptualize the spaces we walk through every day and that so easily almost disappear even as we look at them. These often grungy, workaday spaces seem so necessary as they are—might we care for them as they care for us? Precisely because they are doing our maintenance work—might we embrace them in meaningful ways? What might those efforts look like?

A glance at an aerial photo of human development most anywhere on Earth reveals ubiquitous scrap pieces of land. Some are just tiny bits between a building and sidewalk; others are multiacre lots hidden behind warehouses or long strips between streets and waterways or along border fences. These parcels of land are so common most of us don’t even notice them. Infrastructures like transportation and water drainage create strangely shaped spaces dedicated to specific, ancillary functions: street terraces, drainage channels, and highway rights-of-way, for example. There are also leftover odds and ends of space with no apparent function, like the bits of biscuit dough after cutting. These spaces are often fenced, creating conditions so ubiquitous and impactful that we now have a new subdiscipline of “fence ecology.” Earth’s rapidly spreading global network of fences likely exceeds the length of roads by an order of magnitude, creating an ecologically distinct and ubiquitous linear feature.19

Although orphanging is far from a solely urban phenomenon, the process is most apparent in cities. Two-thirds of all humans live in cities. Urbanization has been the great economic engine of the last fifty years. And while the amount and character of orphaned space varies enormously between Detroit and Lagos, or between Buenos Aires and Manhattan, “vacant” land and open space represent a remarkably significant percentage of urban land everywhere. And it’s increasing. Cities around the world are stretching out, consuming land at a rate that exceeds population growth. In cities around the world, urban land consumption outpaces population.20 Even with slowing population growth, development continues to unfurl—and, along with it, the routine orphanging of space. Furthermore, as cli-
mate change forces new migration patterns, new housing and commercial development will expand to accommodate these changes.

A 2016 survey of U.S. cities concluded that over 17 percent of urban land is “vacant” (defined as undeveloped, remnant, underutilized, abandoned, or damaged) and that “most vacant parcels are small, odd shaped, and disconnected.” But orphaned spaces are much more than vacant. The *Atlas of Urban Expansion* analyzed the density of 200 cities around the world with populations of over 100,000. The project revealed that urban “open space” includes parks and golf courses, rights-of-way, community gardens, campus greens, and brownfields, as well as abandoned lots. Across the 14 U.S. cities studied, urbanized open space (any “open-space pixel” less than 200 hectares and within 100 meters of built-up pixels) ranged from a low end of 21 and 22 percent in New York and Los Angeles, respectively, to 43 and 51 percent in St. Paul and Raleigh, respectively. On closer inspection via Google Maps, St. Paul’s “urbanized open space” includes golf courses, greenways along drainages and boulevards, campuses, and parks but also brownfields and litter-strewn, remaindered land fragments between developments and roadways.

Houston, a town infamous for its sprawl, flaunts 36 percent open space, according to the *Atlas*. The city’s relaxed zoning and extensive hardscape are legendary. It suffered severe flooding after Hurricane Harvey in 2017 and continues to flood during even ordinary rains, in part because of the extent of hard surfaces and the lack of integrated stormwater management. Houston covers twice the area of New York City and has only a quarter of the population, which has doubled to 3.8 million since 1980 and continues to grow, adding 386 new square miles of impervious surface in the last 20 years. Most of the flooding across Harris County during Hurricane Harvey occurred outside officially designated floodplains and disproportionately impacted neighborhoods of Black and Hispanic people. Reasons for this include uneven, and minimal, municipal investment in stormwater management across the city. Houston’s development, heralded as “free market,” is, of course, not at all free. The city’s development is subsidized by cheaply manufactured housing, taxpayer-subsidized tax credits, mortgage interest deductions, gas subsidies,
The Urban Extent of Minneapolis-St. Paul in 2014 was 251,256 hectares, increasing at an average annual rate of 1.4% since 2000. The urban extent in 2000 was 206,520 hectares, increasing at an average annual rate of 2.9% since 1990, when its urban extent was 155,588 hectares.

Figure 1.4 The Atlas of Urban Expansion project mapped the extent of urban “open space” in 200 cities, revealing that vacant plots, parks, golf courses, rights-of-way, campus greens, brownfields, and other ubiquitous unbuilt space represent some 22 to almost 50 percent of urban extent. Here, in Minneapolis/St. Paul, the purple color represents built-up areas, the yellow shows urbanized open space, and the green represents larger unbuilt “rural” areas larger than 200 hectares. (Map from Shlomo Angel, Alejandro M. Blei, Daniel L. Civco, and Jason Parent. Atlas of Urban Expansion. Cambridge, MA: Lincoln Institute of Land Policy, 2012.)
flood insurance, and highway construction money—not to mention emergency relief, including homeowner buyouts.

The extent of Houston in 2014, according to the Atlas of Urban Expansion, was 423,148 hectares, or 1,045,621 acres, with some 375,000 acres of open urban space, but it ranked 81 out of 100 cities in the Trust for Public Land’s “ParkScore” ratio of people to green space. If you visit some of Houston’s “open space,” you’ll find vacant lots and parks but more often drainage areas for parking lots, greenways alongside channelized and cement-lined drainage ditches, and rights-of-way alongside highways.

The Harris County Flood Control District, where Houston is located, is charged with maintaining more than 2,500 miles of drainage channels, natural bayous, and large stormwater detention basins within the city limits as part of its attempts to manage water. A district report reveals that’s equivalent to 18,000 acres dedicated to water storage and capture and subjected to “mowing, selective clearing, hazardous tree removal, herbicide application, tree pruning, and removing sediment and foreign materials that build up.” The maintenance and opportunity costs are huge. Over a fourth of the city’s revenue is from water and sewage fees, and its public works division, at over $2 billion, is the largest line item in the city’s budget.24

What kind of land ethic upholds such routine generation of isolated and single-use space? Orphans are a type of waste, casualties of a rush to develop with little incentive to be sensitive to a broad valuing of land: for place, history, or local participation and control in what happens and where. Orphaning suggests low regard for ecological connectivity, local control, and non-consumption-oriented activities.

Chicago is a much more densely occupied city than Houston but still harbors 27 percent urbanized open space overall, and while this varies widely depending on proximity to the city center, even close in there are small open lots, areas with trees, and, of course, street terraces with grass and rights-of-way alongside train tracks.

How should we think about these fractured geographies? Orphaned spaces are maintained to have anemic social and ecological networks. Of course, closer inspection can reveal a lot going on—life flourishing in the cracks. As many intrepid urban explorers have doc-
documented, the variety of life that can develop and thrive in edgy urban lands is remarkable. Large open spaces and parks in U.S. cities are home to muskrats, squirrels, foxes, coyotes, deer, rabbits, prairie dogs, and even elk and mountain lions, not to mention people. Cities in India even harbor jaguar habitat. Small urban “marginalia” support bees, flowers, hawks, and much more. As geographies of industry and infrastructure shift, spaces become available for colonization

Figure 1.5 Chicago Wilderness, a coalition of some 300 organizations, developed a “Green Infrastructure Vision” of 1.8 million interconnected acres of remnant woodlands, savannas, prairies, wetlands, lakes, and stream corridors. (Reprinted by permission of Chicago Wilderness.)
of all kinds of new species and new activities. One famous example is Toronto’s Leslie Street Spit, a defunct Lake Ontario port constructed from urban debris that famously flourished in response to human neglect and transitioned from hideous industrial by-product to “widely cherished feature” and world-ranked birding site.25

But when such spaces are viewed more carefully, the romanticism can fade. Biodiversity is often found only in larger, better-managed, and well-established urban parks. And biodiversity can be more a reflection of the expansion of human development into the wild than an embracing of it. Wildlife and certain plant species become labeled as pests and experience a precarious rather than nurtured existence. Thom Van Dooren and Deborah Bird Rose have written about how humans have targeted flying foxes residing in urban parks in Queensland with smoke bombs, water cannons, firecrackers, and noise machines.26 An increasing number of humans are occupying orphaned spaces, too, forced in by increasingly high costs of living and lack of good jobs and social support. People who set up house in orphaned spaces suffer from constant vulnerability to crime, as well as food, water, and hygiene insecurity, not to mention unpredictable visits from authorities seeking to drive them out.27

Puzzle pieces of vacant land dot cities and exurban areas. Such spaces cost us in their disciplining—fencing, mowing, and applying pesticides—but we also lose the potential benefits of spaces connected in more diverse ways that might help to more fairly distribute resources and provide support to people in all parts of a city. People who invest in such spaces—connecting into them as guerrila gardeners or other caretakers, trying to grow food or trees, for example—can lose years of soil-building or tree-nurturing efforts in a single morning when the city sends in a bulldozer to clear a piece of once-vacant land for a new development.28 The routine creation and maintenance of orphaned space feels tragic, a symptom of a febrile land ethic. It is in part the material expression of planning and culture that persists in creating anonymized space—disconnecting people in the name of a master plan of efficiency—and thinking in terms of “systems” instead of stories. The promise of orphaned space is not a matter of restoring something lost, chasing a vision of a past ecological balance or a utopian notion of fine-tuned master urban
ecology, but the opportunity for diverse stories, for something unique to bubble up.

Maintaining orphans is work. As any ecologist knows, the land contains tremendous forces constantly pushing to reconnect (or invade) any “properly functioning” infrastructure. Consider the price we pay to maintain a “smooth” space. We fence, plant monocrops (Kentucky bluegrass is a favorite), mow, spray pesticides and herbicides, riprap waterways, channelize with cement, and cover in asphalt. Such activities “police” space, keeping flows of succession at bay and limiting the presence of people and other life.

In *The Forest Unseen*, David George Haskell offers a wonderful description of this policing, comparing a small patch of forest—which he calls the “mandala”—to the orphaned space of a golf course. “A golf course’s ecological community is a monoculture of alien grass that emerged from the mind of just one species,” he writes. In contrast, “the mandala’s visual field is dominated by sex and death: dead leaves, pollen, birdsong. The golf course has been sanitized by the puritan life-police. The golf green is fed and trimmed to keep it in perpetual childhood: no dead stems, no flowers or seed heads. Sex and death are erased.”

We spend billions maintaining that strange country. Pollution of waterways from pesticide use is increasing—especially in cities. Overall, the proportions of urban streams contaminated with one or more pesticides that exceeded an aquatic life benchmark increased from 53 percent between 1992 and 2001 to 90 percent from 2002 to 2011.

Space can also be isolated by virtue of toxins that discourage connectivity. Brownfields, large and small, persist as problems everywhere, blighting neighborhoods and poisoning groundwater. (At one extreme, the great ocean garbage patches might even be considered orphans—areas in the ocean increasingly populated by plastic waste and being deprived of more diverse connectivity as a result.)

More recently, the production and maintenance of orphaned space are coming into focus as people confront lack of green and open space in an increasingly urbanized world, social isolation, economic inequity, gentrification, urban heat islands, flood management, and food insecurity. We’re amassing increasing data about, for example, the role of trees in combatting heat islands and boosting mental health,
and how capturing rain where it falls can ease the burden on increasingly overwhelmed stormwater infrastructure. New ideas are being generated about how to create spaces that grow things, including food, and that also improve public safety, biodiversity, food sovereignty, and more. The dearth of meaningful and welcoming open space became painfully clear in the pandemic-related lockdowns beginning in 2020, with billions of city dwellers stuck at home and limited space outside within which to be safe.

Looked at holistically, the spaces of our public infrastructure, which can be aqueous and atmospheric as well as terrestrial, represent enormous challenges and, correspondingly, opportunities. Many of the water and sewer systems in the Great Lakes region are over 150 years old, for example, and with system expansion prioritized over maintenance, the costs of protecting drinking water and the health of streams, rivers, and lakes are increasingly overwhelming. There is a politics to the geography of orphaned spaces and neglected infrastructure; their distribution negatively impacts some people more than others. Louisville, Kentucky, for example, has lost an average of 54,000 street trees a year to development, storms, pests, and old age, leaving it with a tree canopy of 37 percent, well below other cities in the region. The resulting urban heat island effect raises temperatures by more than 10 degrees in the city, with poorer, and less green areas of town seeing the highest temperature increases. Long-term neglect of infrastructure exposed already disadvantaged Houston residents to increased risks from flooding, and across many U.S. cities, the neglect of parks and street trees and a concentration of heat-producing asphalt coincides with lower-income neighborhoods.31

Orphaning is a generous category, perhaps overly so. But at the risk of too general a concept, I want to suggest a conceptual continuity allowing us to glimpse a radical position in which all land contains and exhibits life and potential. There is no such thing as wasteland.32 When we deny the anonymity of land or territory, we step toward alternative land imaginaries—ones with new inhabitants, visitors, and relationships. As Ukeles understood, the practices of orphaning space reveal value-laden hierarchies that denigrate landscapes of maintenance and care and allow (some of) us to pretend to escape responsibilities of our own social reproduction. The combined pres-
sures of urbanization and the unpredictability of climate change are creating chaos, but also opportunities for new relationships to our structures of maintenance that might serve more of us better. At the root of this project to love orphaned space is a new vision of how to better dwell on Earth.

I’ve explored orphaned spaces in Fargo, North Dakota; along the Arizona-Mexico border; and in Madison, Chicago, and New York. My tour guides have largely been artists, challenging the forces that create orphans and pulling in new actors, building new networks and alliances, and causing trouble for the institutions dedicated to maintaining business as usual. By working in orphaned spaces, it seems to me that the artists create opportunities for moments of transcendence—an expanded awareness of existence—even as they tackle everyday, on-the-ground problems. Motivated by feelings of care and responsibility, they work across technical and scientific boundaries and rethink cultural heritage. They investigate the emotional experiences of different landscapes, exposing wounds of racist, exclusionary human histories as well as buried ecological tales.

In Chapter 2 I share ways that urban “voids,” to use Barad’s term, have been written about in the context of the environment, urban space, and infrastructure. I write about the skills and tactics of revisioning our dwelling spaces as part of efforts to rethink our “right to the city,” following Henri Lefebvre, and building new networks via a process I call, following Isabel Stengers, the “diplomacy” of art. I argue for the role of care in generating new heterogenous assemblages, or publics, around concern for orphaned space. I aim to be specific, to go beyond the idea of an easy, “natural” conviviality in order to pull into focus the human and other-than-human labor of building networks. Toward that end, in the second chapter, I posit three proposals or conditions for loving orphaned space, which I return to in each of the following chapters to help organize my thinking about this kind of endeavor.

Chapters 3 through 5 feature three case studies—from Chicago, the Bronx in New York City, and Fargo respectively—of different artist-scientist and community collaborations that address the orphaning of space. I use each case study to explore cross-cutting themes about urban space, right to the city, caring for Earth, and
thriving amid insecurity. I tell the story of an abandoned gas station lot on Chicago’s South Side—the site of School of the Art Institute of Chicago sculptor and professor Frances Whitehead’s project *Slow Cleanup*, which she described to me as “just the right speed.” I discuss how she reorients research in phytoremediation—the use of plants to clean polluted soil—to include factors related to human-plant relationships and environmental injustice. Her work literally pulls long-buried pollution into view in a grand gesture, offering an opportunity to reflect on automobiles, gas stations, redlining, and the petroleum industry. Working to put artists’ knowledge to practical use to a city agency, Frances challenges the conventional categories of urban zoning to create a palette of possibilities. Abandoned transportation infrastructure, she shows us, is part of our cultural heritage. Telling the tale of this artwork weaves together a history of gas station economies, the unevenness of Chicago’s real estate market, the travesty of leaky underground storage tanks, giant soil hydrocarbons, and plants playing alchemist with phytoremediating microbes.

The Bronx River in New York, once a summer destination for people living nearby, was, in the second half of the twentieth century, both literally and figuratively disappeared in the South Bronx by development, pollution, highways, and the role of the borough as waste site for the New York metropolitan area. In Chapter 4, I introduce artist Lillian Ball and describe how her work builds on a long history of resistance in the Bronx to grassroots environmental injustice and how, through her *WATERWASH* installations in New York, she aims to offer a systemic solution to gnarly urban hydrology problems encountered in cities everywhere.

In an almost ironic juxtaposition with the neighborhood’s urban grittiness and concrete perpendicularity, Lillian Ball’s project is sparkle and curves, a fantastical interruption of business as usual. The artist’s project creates a stage from which people can view a working performance of plants “caring” for the city. This is not just an intellectual reckoning but an effort to bring spectacle, sensuality, and new relationships to the Bronx River as it makes a reappearance. The space opened by her project requires a slowing down of both people and water, creating opportunities for residents to connect to
a river made invisible by conventional infrastructure. The creation process is not straightforward; relating the unfolding of the project reveals how this work pushes against the grain. I rely on Isabelle Stenger’s notion of “the diplomat” to argue for the role of art in bringing actors together in projects, including humans and nonhumans too often ignored.

In contrast to the slow-moving and homogeneous snowscape presented to us in the Coen brothers’ movie Fargo, I found the city a diverse and tumultuous place. In Chapter 5 I chart Fargo’s uncomfortable relationship with floodwater and the tremendous amounts of human energy and concrete dedicated to taming the Red River of the North. I describe how artist Jackie Brookner was brought to Fargo to help city residents practice “creative agency” in rethinking the giant stormwater basins that dot the city. Her efforts helped expose surprising disconnections in these spaces—not only to water but to “New Americans,” as they are referred to in Fargo—refugees brought to the city from places so devastated by war that there is no longer a home to return to. The art confronted the “livability” problems of a stormwater basin and at the same time pushed the city to face its challenges in truly welcoming refugees and the diverse cultures they represent. The artist and her colleagues created occasions for the diverse inhabitants of Fargo to encounter each other and to engage in an expanded range of sensorial experiences with land, plants, animals, and water as active participants.

In the final chapter, I follow my friend John into another orphaned space, this time a farm field. He begins our walk describing how glaciers formed the rolling, yin-yang shape of the land and speaks of decades of row cropping that also shaped what we see. His vision for this space provides entry into concluding thoughts on the efforts of environmental artists and others in challenging current frames for our use of Earth, especially as we create spaces dedicated to our own maintenance. I describe the ways this work offers a feminist challenge to fractured geographies and to societal mores that separate off working space as lesser. I discuss why artists have been well suited to take advantage of a moment in time when openings to “love” orphans present themselves. I revisit my three conditions for loving orphaned space and summarize the contributions of this work in redirecting
the science and technology of infrastructure to address systemic problems like abandoned gas stations and racially fragmented public spaces. I consider the issue of precarity, a dominant theme in so many of these efforts, and discuss how anyone might go about loving an orphaned space. The expansion of our narratives about what can happen in such spaces is key, reflecting opportunities for two-way relationships—including with animals, plants, water, wind, and other environmental players—even at a time when so many possibilities appear to be increasingly risky or shutting down.

In their capacity for expanding sensitivities to orphaned space and their fearlessness in taking on new knowledges and diverse skills, artists have charted adventurous paths in orphaned spaces. Their stories help us see territories to reclaim and cherish as part of a whole that sustains us all.