INTRODUCTION

STARING OUT FROM THE PORCH of my house in Columbus Ohio on a late spring morning a few years ago, not long after I purchased the property, I noticed something disturbing about the yard and, simultaneously, about myself. My eyes had become fixed on a bald patch of ground in the shade where the grass had retreated and where the yard had come to favor a dull green moss, mixed with clover. Everywhere else, the yard had become covered with a purple-flowered ivy. I found the mint smell of the dusty vine pleasant; at least I had earlier in the week as I walked through it on a shortcut to the sidewalk. Now, however, I looked on it with concern, since I had been warned the day before that this was "Creeping Charlie" (*Glechoma hederacea*), an aggressive plant that would soon devour my lawn. It wasn't long after this that the usual junk in my mailbox—and there was lots of it that spring—began to seem more interesting to me. It was clear from colorful flyers that there were a staggering range of options available to me for dealing with the idiosyncratic qualities of my front yard, most of them involving a labyrinth of "steps programs" to rid myself of my problems. These "helpful" instructions had been sent to me by a number of companies and services, and they explained when, where, and how to take care of the grass. What disturbed me was that these flyers and procedures had begun to linger in my mind as I lay in bed at night. My lawn was keeping me awake.

As a self-described environmentalist with absolutely no interest in gardening or home maintenance, I felt a twinge of guilt accompanied by ecological anxiety. This became most acute when I considered the option of actually applying some of the chemicals that were being marketed to me (perhaps at night when no one was looking!). Why was it that weeds had never bothered me until the day I was responsible for "caring" for a lawn? How did the needs of the grass

come to be my own? Something unpleasant was happening. In brooding about the grass, my role in its care, and my relationship to the vast economy designed to manage it, I was becoming a slightly different kind of person, a sort of . . . "lawn person."

How Did This Happen?

Nearby in suburban Reynoldsburg only a year earlier, neighbors of Ketha Robbins (who is no relation to the author) trespassed on her property in the middle of the night, mowed her lawn and ripped up the saplings that were growing there. Robbins' decision to restore the forest in her backyard by ceasing to mow and pull weeds had clearly inflamed something in those who lived around her. Though the city found that Ms. Robbins had not violated the spirit of municipal 6-inch maximum lawn height law, a jury of her peers—lawn people through and through—had spoken in a single act. While at the time of writing the civil case remains pending in municipal court, the matter has been effectively settled by a frighteningly coordinated social action.[1]

Who Are These People, and How Did They Get This Way?

This profile of a simultaneously zealous and anxious community is not unique to Columbus, Ohio. A survey of U.S. households conducted in 2001,[2] asking people how they manage their lawns and how they feel about the risks and hazards associated with turf care, suggests a nation of similarly ambivalent citizens. The survey revealed that those who apply chemicals to their lawns (controlling for income and education) are statistically *more likely* than nonchemical users to believe that "home lawn-care practices generally have a negative impact on local water quality" and that "lawn-care services have a negative impact on local water quality." People who use chemicals tend to think they are worse for the environment than those who do not.

This is at first surprising, but on closer examination seems somewhat familiar. Contemporary cities are populated by people with many similar ambivalent and anxious desires. Driving a sports utility vehicle (SUV) brings with it a complicated calculus of global environmental change, public safety, and one's own risk. Drinking coffee presents a blinding array of options, from organic to fair trade, all linked to the dawning awareness of connectivity between simple daily behaviors and broader ecological and economic systems. Every checkout counter decision between "paper" or "plastic" appears to present a negotiation between mounting landfills and clear-cut forests. And no one is more intimately aware of such connections, it would seem, than the average people who face these ecologies and economies, and whose actions are so closely tied to those broader

worlds. But the fact that being a lawn person is similar to a whole class of other urban ecological behaviors does not, in and of itself, untangle the mystery of why the contradiction occurs.

Why Participate So Fully in Something That Makes One Anxious, Especially Something That Takes Time, Capital, and Effort?

The Lawn is Urban Ecology

Certainly the aggregate effects of the ambivalent labor of lawn people are self-evident. Covering a total area roughly the size of the state of Iowa,[3] the lawn is one of the largest and fastest growing landscapes in the United States. The lawn also receives more care, time, and attention from individuals and households than any other natural space. In many North American communities, the lawn represents a continuous intensively managed parkland connecting mile-upon-mile of grass: unmistakable, unbroken, ubiquitous (Figure I.1). Inputs into the lawn—in time, labor, money, and chemicals—have never been higher than they are today, and the rate of increase in the last decade is startling. Outdoor household fertilizer usage more than doubled just between 1994 and 1999, from 21 million households to 49 million. Between 1988 and 1989, use of outdoor insect control chemicals (most of which were applied to lawns), grew by 44%.[4] Behind such changes is a growing national and international lawn care and lawn chemical industry. One in five U.S. households used a lawn care company in 1999. With 24 million households spending an average of $55 each, U.S. homeowners spent a total of 1.2 billion dollars just on outdoor insecticides in 1999. Total U.S. consumer sales on lawn care (separate from gardening and other outdoor investments) topped 9 billion dollars that same year.[5]

Lawns also represent an urban ecological problem on a vast scale. In the United States, the chemicals of lawn maintenance–including dichlorophenoxyacetic acid (2,4-D), glyphosate, diazinon, and dicamba–are significant contributors to nonpoint source water quality problems that continue to elude solution almost 30 years after the passage of the Clean Water Act.[6] Lawn pesticides are applied on a scale to rival agricultural toxins; 23% of the total 2,4-D applied in the United States is used on lawns; 22% of glyphosate, 31% of chlorpyrifos, and 38% of dicamba used nationally is applied to home lawns.[7]

But the actual care, feeding, and reproduction of this vast expanse of greenery is the business of countless, independent, individual people. As with many urban ecological dilemmas–including problems such as household garbage disposal and commuter-driven carbon dioxide emissions–this makes the problem a staggeringly complex puzzle. It is hard to get one's head around these problems precisely because they are driven by the disaggregated choices of countless individuals, each of whom is living within a labyrinth of complex daily

FIGURE I.1 The unbroken urban grassland: lawns form a contiguous monocultural park.

decisions. Millions of choices govern daily activities such as trash disposal and automobile use, and combine to form the urban environment.

Of course, the very *ordinariness* of these daily decisions makes them easy to overlook, even as they combine to create large effects. The most frequent encounters between human beings and other life forms, after all, occur in the most mundane places: the kitchen, the bathroom, and the backyard. Because such interactions are mundane, however, does not make them trivial, especially given

that these household spaces and interactions are constant and ubiquitous. The use of household antibacterial soap may influence the evolutionary selection of bacteria and the creation of super-germs.[8] People influence water quality through flows of raw sewage propelled with each flush of the toilet. The average car in the United States expels its own weight in carbon into the atmosphere every year through daily driving. Average individuals perform all of these actions every day.

So the consensus across the country to manage and care for turfgrass through the use of chemical inputs and crew-cut mowing must be viewed as more than a coincidence, and the effects of this consensus–on ourselves, our health, and our economy–all demand exploration and explanation. Why do we do it and what effect does all this activity have on us as people and as communities?

Urban ecological research actually tells us very little in this regard. Most research on urban environments, even where it pertains to nature and nonhuman elements such as water, trees, and waste, has tended to emphasize the role of vast bureaucracies, engineering firms, and planning offices. The harnessing of Los Angeles' water, a topic of countless books (and the movie *Chinatown*), was the product of a cabal of planners and developers. So too, it was large-scale planning and the demands of city health officials that reversed the flow of the Chicago River in 1900. But the environmental realities of the twenty-first century, including landfill overflows, greenhouse gas emissions, and chemical use and exposure, are as much the work of individuals as states or firms.

In this sense, the lawn is a very good place to start unraveling how urban ecologies work more generally, and how the ecology of cities makes us certain kinds of citizens. To explore and understand the lawn in its ecological, economic, and social context then, is to ask new questions in the nascent field of urban ecology. How do individuals fit in larger urban ecologies and how do they get to be the kind of people they are?

This brings us back to the dilemma of Ketha Robbins who, until further notice, will have a lawn in her backyard no matter what she may prefer, her homestead extending in a small way the growing sea of lawns in urban America. How did her neighbors come to form their priorities and aesthetics? And what form of urgent neighborliness would drive neighbors to behave so . . . well . . . unneighborly?

To answer "they behave that way because the lawn is important to them" is entirely unsatisfactory. Why do we want what we want? What places demands on us: neighbors, large companies, family, and even the turfgrass itself? How do we come to understand and trade-off our aesthetics, environmental values, and community desires? What are the implications for our health and our communities? In this sense, the questions that need to be asked extend beyond the boundaries of the lawn, to something larger in our ecological polity.

This is a book about the North American lawn then, its ecological characteristics and its political economy. But it is, more intimately, about nature's influence on us, and its role in producing certain kinds of communities and

individuals. The volume aims to describe the array of linkages that the contemporary turfgrass yard makes to complex ecosystems, vast chemical production economies, community values and priorities, and personal aesthetics and obligations. More generally, the book posits a larger argument, that the lawn is a system that produces a certain kind of person–a turfgrass subject. The volume will therefore be more than a summary and consolidation of previously written academic work. Instead it intends to provide a novel explanation of how daily life is not only manipulated by an enormous and growing economy of landscape management, but also how it is controlled and disciplined by a nonhuman actor–the lawn itself.

This is by no means the first book on the lawn, nor will it be the last, I trust. Bormann, Balmori, Geballe, and Vernegaard's *Redesigning the American Lawn: A Search for Environmental Harmony* (from 1993) grew from an innovative interdisciplinary seminar at Yale intended to capture the elements of design, landscaping, and ecology necessary for imagining an alternative to front lawn monoculture. This excellent brief treatise shows how better design might point the way toward less demanding and more sustainable outcomes.[9] Michael Pollan's short 1991 essay explored the same topic more succinctly by simply asking *Why Mow?* His approach to the question, recording his ongoing personal experiment of replacing his lawn slowly but surely with garden, also emphasizes the arbitrary nature of the lawn aesthetic.[10]

Virginia Scott Jenkins' now-classic 1994 volume, *The Lawn: An American Obsession*, carefully and exhaustively traces the arrival of the turfgrass lawn to America and its expansion into a ubiquitous ground cover, with serious attention to the environmental problems that such a transformation entailed. This work is especially notable for the way it emphasizes the remarkably recent history of a landscape that seems so quintessentially normal and timeless to many of us.[11]

One of the most serious academic treatments the lawn has received is Georges Tessyot's 1999 collection *The American Lawn*, which provides an exhaustive genealogy of the lawn as a landscaping phenomenon. In particular, this book unites the lawn with other aesthetic movements both in the history of art and architecture.[12] Pointed more squarely at social analysis, Fred Schroeder's 1993 *Front Yard America* interrogates the history of the American lawn in terrific detail, empirically dispensing with "natural" explanations for its existence (see Chapter 1) and pointing to the relatively recent emergence of the "democratic" front yard. More than this, Schroeder's book stands in defense of the yard as a product of urban democratic history, even while he criticizes some of its "unintended" economic and ecological side effects, including water and chemical-hungry turfgrasses.[13]

The most recent (2006) and accessible work, Ted Steinberg's *American Green,* provides exhaustive evidence of the lengths Americans will go to achieve the perfect lawn. Laid out in the form of an environmental history, the work

shows the step-by-step rise of the lawn aesthetic and the technologies required to fulfill it, including some disturbing and startling facts about lawn mower injuries, among other graphic and visceral stories. This book provides one of the most readable approaches to the problem, one that might be put in front of an extraterrestrial visitor to help both describe and explain American culture.[14] All these books and essays emphasize, justifiably, that Americans love their lawns, viewing them as signs of opulence, leisure, and achievement.

The search for alternatives to the lawn has spawned a noble industry of its own, on the other hand, and most outstanding in this regard are *The Landscaping Revolution* and *Requiem for a Lawnmower*, by Sally and Andy Wasowsky. Combining common-sense solutions with acknowledgment of dynamic ecology (especially the implications of increasing water scarcity), these books provide realistic alternatives for people who want to replace lawns with something else.[15]

While I would direct any serious student of the lawn (or of vernacular culture more generally) to these excellent works, this book begins where they leave off. While I draw heavily on the insights of these previous explorations, the volume diverges in its emphasis on explaining the work the lawn does on us as individuals, communities, and cities. The book also adopts an approach that focuses especially on broader political economy, since while the lawn is of course a fundamental product of American imagination–a symbol–it is also a vast and coercive economy. More specifically, monocultural lawn cultivation imposes a set of economic relationships between grasses, weeds, chemicals, companies, and people.

It is not enough, this book suggests, to argue that the peculiar history of America (along with Australia and other places where turfgrass lawns prevail) led to a series of unrelated pressures to produce this relationship. The depth, ubiquity, and resilience of the resulting pattern requires us to consider, rather, the relationship between these various forces and actors. Do turfgrasses, chemical companies, communities, and individuals simply co-inhabit the world as an unfortunate accident, or is there a political, economic, and sociocommunal bond between them? If so, how does it function and how might it be shattered? How do lawn *workers* (we who maintain these landscapes) become *subjects* of the turfgrass economy? How do turfgrass relationships coerce firms and communities to create altogether new kinds of people? To answer these questions, this volume depends on quite a bit of primary data (interviews, measurements, surveys) to get a clearer picture of why people and grasses do what they do. The original research draws on three years of funding from the National Science Foundation (Award #0095993), and was conducted between 2001 and 2004. The research involved a range of methods including a national survey; some air photograph analysis; a survey of lawn chemical applicators; an investigation of business reports; and interviews with homeowners, business owners, and university extension agents. The details of how this work was conducted and the more exhaustive data that resulted are available for review in Appendix B. These have

been left out of the main body of the text to make room in the volume for the arguments to follow.

The Rest of the Volume

Chapter 1 briefly presents a portrait of lawn people and their curious characteristics and beliefs, specifically showing how lawn chemical users are more likely to be concerned about using chemicals than nonusers. It then lays out the conceptual architecture of the approach taken in the book, interrogating the assumptions with which the lawn is typically viewed, in order to offer a hypothesis to explain this curious contradiction. Specifically, this chapter points to the instability of several apolitical ideas about people, communities, and economies, including the notion that environmental outcomes like the lawn are simply the product of *culture*, *choice*, and economic *demand*, and that nonhuman actors such as turfgrass have little or no influence on the outcomes that involve them. The chapter offers an alternative, explicitly political approach, which points to the mutual tyranny that individuals, communities, firms, and lawns exert over one another. It further argues that it may be useful to think about the lawn as a kind of sociotechnical system, which produces a political and economic turfgrass subject–that sort of urban/suburban person whose identity is interpellated (literally from the French, "called" into self-recognition) by the high-input lawn, and whose life is disciplined by the material demands of the landscapes they inherit, create, and maintain.

Chapter 2 critically evaluates the idea that the lawn is an expression of American culture, rather than of economy and politics. Surveying the history of both the idea and practice of lawn maintenance in the New World, the chapter points to the way lawn grasses have come to thrive as part of a larger pattern of ecological conquest since 1492. It also emphasizes the way the lawn has, since its inception, been proffered as an instrument both for maintaining growth in contemporary urban development and for creating a responsible domestic American citizen: a responsible, domestic kind of person. Rather than simply being an artifact of culture then, the lawn is better understood as a vehicle for creating certain kinds of cultural subjects.

Chapter 3 examines what turfgrass lawns *require (*especially in terms of chemical inputs and labor) to maintain the green, monocultural aesthetic most valued by lawn people. Surveying the ecology of turfgrasses and the demands of lawns, the chapter concludes that not only are inputs required but that, should anything like the ideal be maintained, the multiple needs of this kind of lawn over seasons and years become the necessary concerns of lawn owners and so govern their behaviors from day to day, and season to season. The rhythms of turfgrass become those of suburban communities and subjects.

Whether or not these inputs represent a meaningful hazard to lawn people themselves or the larger ambient ecosystem, and whether that hazard has

become more or less acute over the last century, is the focus of **Chapter 4**, which surveys the history of the lawn chemical industry and the risks associated with the current dominant suite of lawn chemicals. Based on both toxicology and on analytical chemistry, evidence is amassed to show the specific ways that these lawn chemicals escape after treatment to influence the broader environment and to enter homes and accumulate and persist as a chronic hazard. The chapter demonstrates that the hazards that concern lawn people are quite real, though fraught with uncertainty, making their position necessarily one of anxiety and unease.

Is this risk an incidental or fundamental part of the economy that produces lawn chemicals? **Chapter 5** addresses this question through an examination of the lawn chemical economy—including chemical formulators (companies that produce consumer products), chemical application companies (who come to your home to spray), and the chemical production companies that ultimately supply them. The results show that there are increasing demands and constraints placed on the industry not only by the market and regulation, but also by the limits created by nature: seasonality and variability. These constraints have resulted in stalled growth, consolidation, and debt. As a result, there have been aggressive recent efforts to secure new markets both by increasing the inputs of current users and by turning nonchemical users into chemical users. This cascade of influences, from producers to providers to homeowners, suggests that pressures within the economy have necessarily led to the externalization of risk onto consumers and workers. They have also led to innovations in direct marketing to bombard homeowners with symbols that reflect a specific urban subject, using images connecting lawn maintenance to community and family.

But how is this manifested in lawn people's decision making and experience? **Chapter 6** examines the motivations and doubts of lawn chemical users through review of national survey results and in-depth interviews with cul-de-sac dwellers. The results show how anxious homeowners reconcile their behaviors with their beliefs, usually through consideration of collective good, community values, and moral obligations. These results reveal that lawn people do not simply "choose" to maintain their lawns, but instead act under the burden of reconciling a range of contradictions in both economy and community.

In the face of such pressures, do alternatives exist and are they realistic? Recently, a range of alternatives to the chemical-input lawn care have emerged, taking the form both of institutional/legal controls, as well as informational and advocacy organizations and new products. **Chapter 7** briefly discusses these changes and reforms, pointing to areas of achieved success (e.g., Canadian chemical bans) as well as potential success (e.g., organic lawn approaches). The chapter emphasizes, however, the degree to which these alternatives face steep social and legal opposition. It also raises questions about how effective alternatives can be if they follow the apolitical logics of free consumer choice and moral citizenship inherent within the existing lawn economy.

Chapter 8 offers a summary of the findings, stressing the way people become turfgrass subjects, through a coercive economy, fraught with uncertainty and anxiety, mediated by a moral dedication to community and family. In so doing, it briefly raises several related questions about the role of anxiety in political and economic change as well as the role of objects in the world around us in making us who we are. Is anxiety politically emancipatory, and do progressive activists need to understand it better? And if objects and landscapes are constantly acting on us, our economies, identities, and polities, has the time come to reconsider the problem of environmental "influences," long eschewed for fear of environmental "determinism"?

The book concludes then, that whereas the aesthetic of the lawn may be old, indeed ancient, the turfgrass subject is new: the urban person who is concerned about nature but uses chemicals, who supports the Kyoto Protocol but drives an SUV, who recycles fervently while constantly wasting more and more. Rather than condescendingly dismissing such inconsistencies as "cognitive dissonance" as is common to apolitical critique, the book advances an alternative, which emphasizes the range of constraints on our alternatives and that stresses the way the biotechnical machines we make increasingly make us who we are.

What the book does *not* argue, however, is that grasses are in and of themselves "bad." The often-vaunted value of turfgrass is true. Grasses on rooftops can help to cool the urban heat island. In agricultural watersheds they can buffer and decompose toxins. Grown as an alternative energy source, grasses can sequester carbon. In urban watersheds, they can slow storm water runoff and reduce noise pollution. In this sense grasses are "good," if such a distinction can be applied to a huge family of species.[16] Turfgrasses predate us in this world and will no doubt outlast us; they are no more pernicious than we are.

Having said this, the specific form the modern lawn takes—large, monocultural, and chemically demanding—is by no means a good thing, nor is it the only landscape physically available to us around our homes. More than this, the poorly hidden costs and risks associated with the contemporary lawn are numerous and expanding. Lawns are by no means the only, or indeed the easiest, urban ecological option. And collectively, as we increasingly know them, they represent a self-imposed burden and hazard.

Similarly, this book does *not* argue that American middle class homeowners (a community from whence the author emerges) are a bunch of dupes or shills for capital, unable to think for themselves. Such condescending and classist forms of cultural criticism are both unconvincing and empirically wrong. So too, they suffer from what Fred Schroeder accurately calls "the Philistine Effect" where "vernacular culture usually appears in the historical record as objects of censure, ridicule, contempt or pity."[17] On the contrary, it is my intention to write as a lawn person myself; a middle class homeowner and neighbor, until recently one with a lawn and a mower–a deeply embedded participant in that which I observe, with no more scorn for my neighbor than I hold for myself.

Even so, as I hope to show here, there are clear tensions between our many contradictory desires; we want to be good citizens, good consumers, and good environmental stewards, a triumvirate that may simply be unachievable. Born of class-based identities and community ideologies, the specific forms that these honest desires take are all further enmeshed in a larger political economy. Simply because we wish to avoid classist analysis, does not mean we should avoid class analysis.