PORKOPOLIS

American Animality, Standardized Life, & the Factory Farm

ALEX BLANCHETTE

PORKOPOLIS

PORK

American Animality, Standardized Life, & the Factory Farm ALEX BLANCHETTE

OPOLIS

Duke University Press *Durham and London* 2020

Printed in the United States of America on acid-free paper ∞
Designed by Aimee C. Harrison
Typeset in Minion Pro and Trade Gothic
by Westchester Publishing Services

Library of Congress Cataloging-in-Publication Data
Names: Blanchette, Alex, author.
Title: Porkopolis : American animality, standardized life, and the factory farm / Alex Blanchette.
Description: Durham : Duke University Press, 2020. | Includes bibliographical references and index.
Identifiers: lccn 2019043393 (print) | lccn 2019043394 (ebook)
isbn 9781478007890 (hardcover)
isbn 9781478008408 (paperback)
isbn 9781478012047 (ebook)
Subjects: lcsh: Swine industry—United States. | Swine breeders—United States. | Factory farms—United States. | Agriculture—Economic aspects—United States.
Classification: lcc hd 9435.u62 b53 2020 (print) | lcc hd 9435.u62 (ebook) | ddc 338.1/764009 73—dc23
lc record available at https://lccn.loc.gov/2019043393
lc ebook record available at https://lccn.loc.gov/2019043394

Cover art: Sean Sprague, *Locker,* 2013–2015. Courtesy of the photographer.

CONTENTS

ILLUSTRATIONS

All images courtesy of Sean Sprague, unless noted otherwise.

ACKNOWLEDGMENTS

I AM THANKFUL THAT academic books place their acknowledgments at the beginning. I am not sure how far into this book friends and acquaintances from Dixon will read. For better and for worse, it is a fair bit more "academic" than a lot of others on this kind of subject matter. This might ring hollow to some of these friends—but the detail and density of these pages is the result of many years of work, and it is a reflection of my respect for you. I think that your home is complicated, I think that it matters, I do not believe it can be reduced to a simple take-away message, and (though this might be my own failing) I do not know how else to depict your unique lives than in thick sentences and twisting paths of thought. This book is critical. Everyone that I met in Dixon will disagree with at least some parts, and I realize that some will object to all of it. But it tries to always be critical of the broader world in which we find ourselves. It is not a critique of people, their decisions, or their beliefs. I do not purport to know how to live your lives or do your jobs differently. This book admittedly does not do a good enough job of communicating how much I enjoyed living in Dixon, and how residents made it feel like home. But I appreciate every moment—the insights, the debates, the patience, the critique of me, the skepticism, and the support. I cannot name names here, but there are many people to thank. Unfortunately, some who taught me the most—not just what to think about, but how to think—are not explicitly in these pages. But they should know that they were with me across every sentence, including those that I chose not to write.

Sean Sprague's photographic talents have greatly improved this book, as did his keen eye and observations during the three months we lived together in Dixon. I also owe thanks to the village that helped raise me. The only thing that makes Bayfield, Ontario, remarkable is the people who live there. Caitlin Ferguson asked me, when I said that I might like to study anthropology for a living, whether I was going to write something that mattered to Bayfield. I do not know whether I did. But her nudge is what sent me down this path.

I was gifted with a brilliant and faithful dissertation committee in the Department of Anthropology at the University of Chicago. All of the (good) pages of this book are tied to the unique privilege of having Joe Masco as a mentor. His combination of creativity, far-reaching thought, deep critical acumen, and dedication to his students is singular. Jessica Cattelino is a model of everything I want to be as a scholar and a person, and I still cling to every piece of insight that she shares. Judy Farquhar instills in her students the desire, capacity, and confidence to try to craft something new. Brad Weiss helped me see why my arguments matter and gave me the faith to pursue particular lines of inquiry when I was not sure where they might lead. Susan Gal is an ideal of rigorous scholarly engagement, and I would not have been able to arrive at this approach to factory farms without her coursework. Although they were not on my dissertation committee, Michael Silverstein and Kaushik Sunder Rajan were invaluable intellectual supports at pivotal times during graduate school. Anne Ch'ien is the bedrock of the University of Chicago's Department of Anthropology. Finally, I owe a special debt to my first real academic teacher and mentor, Bonnie McElhinny. In just twelve brief months of engagement during my senior year of college at the University of Toronto, her pedagogy, brilliance, and towering example transformed me from a lackadaisical student with fleeting interests into someone who was ready to pursue study for life.

The Tufts University Department of Anthropology is an open-minded and inspiring place to write and teach. Cohorts of students have pushed my ideas, and I am grateful to Diane Adamson and Cass Madden for serving as exemplary research assistants on elements of this project. My colleagues are a model of support and generous critique. Thank you especially to Amahl Bishara, Tatiana Chudakova, Coco Gomez, Jamie Gorman, David Guss, Kareem Khubchandani, Lisa Lowe, Sarah Luna, Zarin Machanda, Kris Manjapra, Colin Orians, Sarah Pinto, Nick Seaver, Rosalind Shaw, Cathy Stanton, and Lynn Wiles.

I am grateful for Ken Wissoker's longstanding interest in this project, his careful editorial interventions, and his unending patience throughout the process. Thanks to Elizabeth Ault, Susan Albury, Aimee Harrison, Chad Royal,

Joshua Tranen, and Toni Willis at Duke University Press, and the two incisive peer reviewers, for their diligent work in sharpening this book.

I completed my doctoral dissertation in 2013 while living as a Weatherhead Fellow at the School for Advanced Research (sar) in Santa Fe, New Mexico. I will forever be thankful that I was able to spend time at such a studious, intellectually nourishing, and beautiful place. A large part of that experience is owed to the staff, scholars, and artists that give sar its special alchemy. Thank you to James Brooks, Linda Cordell, Doug Dearden, Elise Edwards, Dean Falk, Melissa Henry, Laura Holt, John Kantner, Nancy Owen Lewis, Jonathan Loretto, Fibian Kavulani Lukalo, Danika Medak-Saltzman, Margaret Wickens Pearce, Elysia Poon, Leslie Shipman, Karla Slocum, Ageeth Sluis, Nicole Taylor, and Carla Tozcano. I had the privilege to return to sar for an advanced seminar on changing relations between nature and labor that shaped some of this book's ideas. In addition to that seminar's participants, whose insights still help me think more clearly, I thank Michael Brown, Paul Ryer, and Maria Spray.

The first draft of this book was completed while I was an S. V. Ciriacy-Wantrup Visiting Fellow in the Department of Geography at the University of California, Berkeley. Berkeley Geography is a dedicated and politically engaged place, the kind of department that expands your ambition simply by being in its orbit. Thanks especially to Jake Kosek, Nathan Sayre, and Michael Watts for their ideas and support. I also benefited enormously from studying with the members of the 2016 Alterlife seminar.

The research and photography for this book was made possible by grant support from the Social Science and Humanities Council of Canada, the Wenner-Gren Foundation for Anthropological Research, the National Science Foundation, and the Toronto Arts Council.

Portions of this book have appeared as journal articles and book chapters. I thank the editors of those venues, and the work of anonymous peer reviewers in helping to shape them. A modified version of chapter 1 appeared as a section of the longer article, "Living Waste and the Labor of Toxic Health on American Factory Farms," *Medical Anthropology Quarterly* 33, no. 1 (2019): 80–100. An earlier version of chapter 2 was published as "Herding Species: Biosecurity, Posthuman Labor, and the American Industrial Pig," *Cultural Anthropology* 30, no. 4 (2015): 640–69. Parts of chapter 5 appeared as sections of a longer chapter, "Making Monotony: Bedsores and Other Signs of an Overworked Hog," *How Nature Works: Rethinking Labor on a Troubled Planet,* edited by Sarah Besky and Alex Blanchette, 59–76. Albuquerque, NM: University of New Mexico/SAR Press, 2019. Two earlier sections of chapter 6

appeared in "Infinite Proliferation, or the Making of the Modern Runt," in *Life by Algorithms: How Roboprocesses Are Remaking Our World*, edited by Catherine Besteman and Hugh Gusterson, 91–106(Chicago: University of Chicago Press), 2018

Every page of this book was critically nurtured over many steadfast years by the insights of the Hive writing group. There is just no way to thank Tatiana Chudakova, Kate Goldfarb, Elayne Oliphant, and Carly Schuster enough. Some of this book's chapters have also been strengthened through participation in varied writing collectives with Susanne Freidberg, Bridget Guarasci, Julie Guthman, Lisa Haushofer, Alison-Marie Loconto, Whythe Marschall, Nick Shapiro, Sarah Vaughn, and Jerry Zee. Sarah Besky has been an inspiring collaborator on writing projects and has pushed my thinking in many new directions. Eli Thorkelson has simply taught me a lot of things, about both academia and the good life.

An enormous number of people have provided encouragement, ideas, and sharp critiques when various versions of this book needed them the most. Their varied commentary on talks and drafts have all made it into this manuscript in some manner. Some engagements were sustained over many years, and others were off-the-cuff comments during presentations that stuck with me for a long time. Thank you to Thomas Andrews, Hannah Appel, Debbora Battaglia, Lindsay Bell, Lucas Bessire, David Bond, Rob Blunt, Summerson Carr, Lily Chumley, Jane Collins, Molly Cunningham, Naisargi Dave, Kathryn Marie Dudley, Joe Dumit, Jan Dutkiewicz, Cassie Fennell, María Elena García, Stefanie Graeter, Phillip Drake, Akhil Gupta, Joe Hankins, John Hartigan, Karen Hébert, Deborah Heath, Kregg Hetherington, Karen Ho, Richard Horwitz, Elizabeth Johnson, Eleana Kim, Yongjin Kim, Mazen Labban, Marcel LaFlamme, Hannah Landecker, Marianne Lien, Kristina Lyons, Paul Manning, Andrew Mathews, Kate McHarry, Amelia Moore, Jason Moore, Amy Moran-Thomas, Michelle Murphy, Alex Nading, Timothy Pachirat, Jan Padios, Anand Pandian, Juno Parreñas, Heather Paxson, Josh Reno, Justin Richland, Gabriel Rosenberg, Shiho Satsuka, Kristen Simmons, Bhrigupati Singh, Harris Solomon, Heather Swanson, LaShandra Sullivan, Christien Tompkins, Gabe Tusinski, Wim Van Deale, Jason Weideman, Kaya Williams, Andrew Yale, Emily Yates-Doerr, and Noah Zatz.

My parents, Janet and Gaetan Blanchette, are an unending well of love and support. They taught me most of what I know. Tatiana, Mira, and Motya make things worthwhile.

PREFACE **WATCHING HOGS WATCH WORKERS**

ON A COLD FALL EVENING IN 2010, I met a man in his late forties named Juan at a house party. A former businessman in his native Mexico, Juan had reluctantly moved with his family to the American Great Plains in the mid-2000s, trying to escape the escalating borderland drug violence in Ciudad Juárez. He was curious about my research, asking me what I had been learning in this remote agribusiness company town. A couple years back, Juan explained, he had worked in a 2,500-head sow breeding barn that was similar to the one where I was currently employed. He wanted to communicate a haunting impression of hogs locked in tiny gestation crates that was seared into his memory. "They have almost 360 degrees vision," he said. He slowly moved his pointing index fingers from his eyes to the back of his head, keeping his digits trained onto my face. "They are always watching you," he continued. "Sometimes they look like they are not looking at you . . . , but if you look at their eyes, you will see that they are always following you." His body gave off an involuntary shiver—and it was not due to recalling the damp barn heat from thousands of bodies or the smell of feces, memories that can still make my skin tingle years later. He seemed to visibly shake at the feeling of thousands of confined animals scanning his every movement.

They are always watching you. In retrospect, Juan was not the only person I met who had tried to become attuned to the thick sentience of animal agribusiness. Someone who taught me how to artificially inseminate sows, for instance, sternly told me to never look a hog in the eyes. If the animals think you are looking at them, they will freeze. If this happens when sows are being

escorted from the gestation to the delivery barns, he explained, it can cause injuries as advancing lines of animals pile up and crawl over each other. We would walk sideways with our faces to the walls to avoid making eye contact whenever we saw hogs moving through the hallways. Another person instructed me to never touch a gestating pregnant sow. She said this seemingly casual act of individual attention can alarm the animal, make it bellow, and lead to an entire row of overexcited neighboring hogs. As hogs have been gradually bred to bear larger litters, to the very limits of what their bodies can sustain, the simple gesture of touching a sow could potentially lead to waves of miscarriages throughout the barn. Otherwise mundane human actions, such as a sideways glance or a stroke of fur, had apparently become imbued with powers to physically affect animals and the broader project of cheap American meat. These people were being taught that their every random behavior was freighted with the potential to manifest in pigs' bodies and flesh.

In pork industry periodicals, animal agribusiness is presented as a site of biosecure, engineered, and controlled confinement. It is often articulated in popular media as the outcome of technoscientifically precise automation, a matter of well-ordered (if cruel) anthropocentric domination over animal lives in mechanized buildings. But following the sharpening stare of industrial hogs allows us to glimpse something else: how new intensities and forms of intimacy are emerging between hogs and the few human beings with whom they still remain in physical contact in these hyperindustrialized spaces. Within these cramped barns underpinned by extreme productivity, where the efforts of as few as five people now help conceive and birth fifty-five thousand animals per year, the very meaning and efficacy of human life and labor is subtly shifting alongside hogs' bodily conditions.

This book is about the politics of industrialism in an ostensibly postindustrial United States, articulated through the changing forms of being human that underlie porcine life and death. It further reinterprets the shifting logics of agribusiness through ethnographic analyses of overworked animals' immune systems, pheromones, instincts, hormones, ovulation, muscle fibers, tendon distribution, fatty acids, and sentience. I begin with an image of highly observant animals, then, because it suggests that even *how pigs look at human beings* is a historical product with evolving consequences as farm industrialization intensifies. The modern porcine gaze, along with how it can biophysically affect hogs, is itself inseparable from the many waves and epochs of industrialization that have been compounded into this animal over the past two hundred years. Compulsively staring hogs can be read as an embodied meta-

phor for the factory farm as a whole. They are a lively symbol of how much human work has been absorbed by the porcine species—how many economic demands are now built into this creature's genetics and carcass—along with, in turn, how biophysically attuned industrial hogs have become to human labor. As I suggest in the pages to come, this might also be seen as a potent image to trouble the tenuous yet tenacious—even totalizing—state of industrial capitalism, labor, and livelihood in select pockets of rural America today.

A NOTE ON PHOTOGRAPHY

THE PHOTOGRAPHS IN THIS BOOK are the result of two periods of collaboration with Sean Sprague, a Canadian photographer. The first series, rapidly shot over ten days in late 2010, is featured in brief photographic chapters that initiate each of the main parts of the book. The short opening chapters, acting as interludes, preview each part's main arguments and transition between worksites on the route from pigs to pork. This first series of photographs features very few human workers, effectively depicting one kind of managerial ideal of total automation without the messy contingencies of human engagement (see chapter 2). Put differently, the focus of this series on the serene environments and aesthetics of pork production should be viewed itself as a kind of capitalist dream image of the factory farm.

Selections from the second series, a set of images compiled over three months in 2013, are featured mainly at the opening of each part. Each of these images is composed from more than one thousand separate photographs, and then, through a laborious process, digitally stitched together to give the appearance of a single large-scale shot (see, for examples, figures 3.1, 5.1, 7.1, or 7.2). In a sense, the scenes in these images never happened: each one is a composite of action unfolding in place over hours. From another perspective, however, they are more realistic and detailed as a representation of these scenes of labor than one can achieve by taking a single image at a moment in time (see Butet-Roch 2015).

Although I allow these images to evoke their own impressions of modern meat making—accompanying and even standing in tension with the text—

they should not be viewed as documentary in nature. They are conditioned by the sites that managers allowed Sprague to depict, how (or whether) those managers prepared sites prior to our arrival, the poses and tasks that some workers felt worthy of depiction over the course of hours, and the process itself generated reflections that result from self-consciously slowing down tasks. The presence of the fraught camera in these kinds of hidden spaces, where meat lobbies' efforts to combat undercover exposés have made it illegal in some states to visually depict agribusiness without an owner's permission (see Pachirat 2011),also sometimes unveiled new ways of sensing work. To this end, my brief and sporadic comments on images focus on what their execution opened up and made apparent during the photographic process.

It was what happened after these images were completed, however, that really taught me something new about how the factory farm is imagined in the public sphere. Although Sprague was solicited by junior editors to submit his images to a major photography outlet, a senior editor balked at being the first to feature them. Perhaps they just did not like the photographs. But it was their explanation that surprised me. Recounting how the news media was once engulfed in scandal after digital photographers had secretly doctored their documentary images, this editor was concerned—even if Sprague was forthright that these images are not "real"—that the subject matter was too sensitive for this kind of art. Viewers expected that a depiction of agribusiness would be purely documentary in nature. I empathize with where the editor is coming from, especially given how the camera has been pivotal to activist projects seeking to unveil the truth of factory farms. But I also take this as a minor reflection of the broader kinds of cultural work people put in to insist that things like modern slaughterhouses (and the people who occupy them) are distinctive sites that come with special rules of representation. Animal agribusiness is deemed scandalous in popular culture, a special domain, an exceptional deviation from some people's imagined norms of American capitalism and society. Rightly or wrongly, I hear in these concerns a sense that this site is unique, and all of these unspoken rules of depiction seem to insist that *this is not us*. What if, instead, we took these operations as not exceptional at all—as normal, and even prescient, reflections of American industrial worlds to come in the near future?

INTRODUCTION

The "Factory" Farm

THE RED MEAT CAPITAL OF THE WORLD

"If it wasn't for the hogs, there'd be nothing here. This would be a ghost town." An elderly man first said these words to me in a coffee shop in the town that I call Dixon, the central hub of some fifteen thousand residents in a recently formed one hundred-mile-radius region that cuts across the Great Plains and Midwest of the United States. He would not be the last. A hairdresser. An art gallery director. A breeding farm manager. A young man who had spent much of his adult life scraping muck from animal intestines in a slaughterhouse. After learning that I had moved to the region to live among those who labor within some of the world's largest pork corporations, the first thing some of these people wanted to know was whether I was "pro- or anti-hog." I would shrug, not yet sure what it meant to firmly ensconce myself in either of these camps. "Neither," I'd say. A few of them nodded that this was a sensible position. They then repeated a version of the ambivalent motto: without the millions of hogs to sustain our livelihoods, everything would disappear. Some of these people had likely read prior writers' dystopian portraits of their home. They seemed to be suggesting, for this new visitor's benefit, that they know the air can get thick with hydrogen sulfide and the soil is oversaturated with fecal nutrients. But what are they supposed to say? Without all the hog excrement, they would not be here. They would not have enjoyed the unique lives they have lived. Dixon would be an empty shell of a ghost town rather than, to invoke another local slogan, one of "the red meat capital[s] of the world."[1]

By 1863, Chicago was officially named the global "Porkopolis," surpassing Cincinnati as the city that killed more animals than any other. Also known as "the hog butcher to the world," Chicago's many slaughterhouses in combination knifed, bled, and eviscerated 970,000 hogs in that year's killing season (Wade 2003, 33). The city's trials to kill pigs quickly and distribute their perishable body parts across continents helped generate the organizational forms that underlie industrial capitalism as many still think of it today: the (dis)assembly line, global transportation networks, and commodities trading (Dutkiewicz 2018; Freidberg 2009; Shukin 2009). Chicago's seas of animal bodies—driven on foot through the city from the countryside, and on display in the Union Stock Yards—were, back then, a popular tourist attraction (Pacyga 2015). This may be hard to imagine today, when animal death offends some sensibilities and is hidden from public visibility (Pachirat 2011; Vialles 1994). But in those times, Chicago's kill floors were fabled places that travelers visited to physically see myths of American progress. As animals were dismembered with the regularity of clockwork, some believed they were witnessing the roots of an incipient future where nature was harnessed for human prosperity.[2] Chicago's scale and sensory overload amazed onlookers, imbuing nineteenth-century mass-slaughter with the quality of what Susan Buck-Morss (2000, xi) elsewhere calls a dream world, or an expression of "social arrangements that transcend existing forms." These were scenes of exploitation, for hogs and workers alike, but they were seen by some as heralding human mastery: "the optimistic vision of a mass society beyond material scarcity, and the collective, social goal, through massive industrial construction, of transforming the natural world" (Buck-Morss 1995, 3).[3]

Industrialism no longer enthralls in this manner. Factories and workshops still generate most of the world's material goods. But they rarely spawn dreams of being on the cusp of history, of summoning a new world (Grandin 2009; Nye 1996). For many communities, large-scale manufacturing has not led to the remaking of nature in service to human flourishing but, instead, left behind unruly polluted and toxic environs.[4] The culture of industry lingers as an idealized object of American nostalgia for a mid-twentieth-century period of stable jobs and social relations that politicians pledge to revitalize after each new and euphoric face of capitalism—from neoliberal globalization to digital entrepreneurialism—fails to realize its social promises. But while industrialism may not be hegemonic as it was in Chicago of the 1890s, Dixon and places like it suggest that it did not cease evolving. Disenchanted industrial technics for extracting value from hogs and the people who kill them have only been in-

tensifying across the twentieth and twenty-first centuries. Waves upon waves of industrialization have been compounded into the porcine body over that long stretch of time, and there is nothing familiar or stable about the emerging result.

In 2013, 150 years after Chicago was crowned the global Porkopolis, the agribusiness corporation that I call Dover Foods would kill some 5.6 million hogs in a single slaughterhouse.[5] At a butcher rate of roughly nineteen thousand hogs dismembered across an eighteen-hour working day—that is, a new pig killed every three seconds—there are more animal carcasses inside Dixon at any given moment than there are living human beings. Each day leads to approximately 2,815,800 pounds of edible muscle being shipped to more than two dozen countries. A portion of the daily harvest of 793,300 pounds of bones is eventually processed into gelatin, bone glue, or soup stock for Japanese ramen. Some 736,440 pounds of varied organs will travel to pet food plants and to pharmaceutical companies for biomedical drugs; 287,000 pounds of blood drip from the kill floor and flow to rendering, where the blood is recycled into plasma for feeding baby piglets. Another derivative of the rendering process is 281,500 pounds of lard for use as biodiesel feedstock or as glycerin in cosmetics. Even the roughly 8,700 pounds of fecal material from hogs held at slaughter, kept in misted pens for an hour-long destressing period after travel from barns, is processed into methane biogas to heat water sanitation systems.[6] Beyond Dover Foods, three other companies that I call Berkamp Meats, Trenton Produce, and Cardinal Packing bring the number of piglets born across this one hundred-mile-radius region each year to well over seven million. This small place was responsible for the conception of more than 6 percent of the 112 million American hogs slaughtered in 2013.

Dixon is something of a nineteenth-century Porkopolis reborn, an ardent experiment in industrialization unfolding in the middle of an otherwise postindustrial United States. It is thus a paradoxical place that is both timely and untimely: it is an unusual attempt to resuscitate select values and aesthetics from the prior ledger of twentieth-century capitalism, yet it is also a project that feels fitting and even iconic of a rural United States that is more broadly being reshaped through corporate biotechnology and racialized inequality. But I do not call this small outpost a new Porkopolis simply because it has become one of a small handful of global centers for the mass-production of animal flesh; I do not label it as such based on its sublime numerical quantity of hogs alone. Instead, what distinguishes this company town as a postmodern Porkopolis are the ways that everyday human life and labor have become

qualitatively infused with, and organized through, dimensions of capitalist swine. Dixon has been built up, and is now being continuously remade, to unlock new forms of value within the hog's body, mind, and behavior. This town marks a zone where corporations' efforts to manifest a highly uniform version of the porcine species, at a massive scale, have transformed the industrial hog into an omnipresent, world-defining creature.

This book is an ethnography of that industrial pig. Developed through the distinct views of people whose planning and labor underpin this creature's prolific and fragile existence, its chapters arch across every stage of the American hog's life and death. They are about what it means to live, work, and be human in industrial porcine worlds—places built through (and for) the exploitation of capitalist animals.[7] The chapters to come trace an array of topics: attempts to rekindle industrial capitalism in a culturally postindustrial United States; the possibilities of (more-than-human) labor struggle in dilapidated environments; the politics of animal intimacy and care in spaces marked by violence; the shifting place of the human body within cheap meat; and the corporate monopolization of an entire species. At root, however, this book boils down to a simple argument. My claim is that agribusiness is not a project of human mastery over hogs. It is not a simple site of anthropocentric domination over another species. That is too faithful to our inherited fantasies and hopes from nineteenth-century Porkopolises. Instead, the "factory" farm is a matter of reorganizing human communities through the life-and-death cycles of the porcine species. Modern meat, as the model is unfolding in the United States, revolves around remaking the lives and labor of human beings to make them amenable to capitalist animality. This shift in the object of agribusiness engineering, I further argue, is a reflection of the ways industrialism is reaching some tensions—some two centuries after companies first started engineering animality in 1800s Cincinnati—as it grapples with a biological being that has little obvious room left for capitalist expansion.

At a time when many insist that we should call the United States postindustrial because fewer people in cities are employed in manufacturing jobs, this book immerses itself in a pocket of that country where things just keep becoming unendingly more industrialized. The process we have labeled "deindustrialization" in the global North since the 1970s, it is worth underlining, has not resulted in a situation in which the material world—from the objects that compose our everyday lived environments to the planet's

climate patterns—is less conditioned by industrial processes (Fortun 2012; Moore 2015). It has meant fewer jobs. In practice, deindustrialization marks the social abandonment and ostracizing of manual laborers—the devaluation of their existence—amid factory closures (Walley 2013; Finkelstein 2019), along with intensified exploitation of the few remaining manual laborers employed in factories in the United States and elsewhere. Depending on the location from which you write, deindustrialization can just as easily be renamed a time of hyperindustrialization: fewer people, places, and species now bear the unacknowledged weight of making the world's material artifacts; it means select people live through unprecedented intensities of work. A key premise of this book is that we err when we think that industrialism is a fixed and prior epoch receding in the rearview mirror, outmoded by new forms and strategies of capitalist accumulation. It is, instead, a process that continues to unfold in novel ways. In turn, the chapters that follow are built around queries that aim to put the very nature of animal agribusiness to question: What is the "factory" in the factory farm? What is the "industrial" in the industrial pig? And each does so to glimpse what it might mean to more radically deindustrialize work, the environment, and the imagination.

Concretely, *Porkopolis* is divided into five parts. Each of these parts offers an interpretation of this experiment in cultivating industrial animality as a whole—yet they illuminate that broader project from the very specific vantage point of one discrete phase of porcine life or death. They include portraits of how diverse people live and labor with industrial boars, sows, meat hogs, carcasses, and viscera. The material textures at each of these sites that compose modern meat are different, and there are many such sites: feed mills, genetics facilities, hog growing barns, slaughterhouses, pet food factories, fat-*cum*-biodiesel plants, bone rendering operations, distribution centers, trailer parks, hospitals, and churches. This path moves from semen extraction to biodiesel transesterification, from a biosecure boar stud to the gelatins that compose your house. Such an effort will not lead to a single conclusion. We will see there are many factories within the factory farm. But what does suture these chapters is an attempt to defamiliarize the contemporary state of industrial capitalism in rural America—and even to deindustrialize the assumptions that we bring to the anthropological study of labor and productivity—by illuminating how agribusiness is not just, or even primarily, an economic matter of making pork and profit. It is also an eminently political project of channeling human energy and imagination toward preserving the social categories, values, and aesthetics of inherited industrialisms.

The remainder of this introduction, however, stays outside the hog muck and blood to develop some propositions about the nature of the "factory" farm. For now, please think back to that slogan: "If it wasn't for the hogs, Dixon would be a ghost town." Let me be clear, first of all, that this is not a neutral statement to make in this region. Many locals who are unconnected to the pork industry would strenuously dispute its implications. And nor is it a neutral ground from which to develop an anthropological analysis. There are many stories that can be told about such a cosmopolitan outpost, and the diverse ambitions that ripple through this place cannot be reduced to an outgrowth of "the hogs." Yet, hearing people constantly invoke that phrase informed how I experienced this region over the course of years, the kinds of things that captured my attention; it has even come to underlie some of the political and ethical commitments of this book. It raises the question *What is the industrial pig in the first place?*, for the motto can be read as a statement about *totality*: one capitalist species supports all forms of human livelihood in this town. It requires asking how the porcine species has been reenvisioned and carnally remade to carry such a burden. Such a statement is also about more than pigs alone. It is about the state of American human life today. It reflects the necessity of wage labor in that country; it indicates how most of us can only live where there are things that put us to work (Weeks 2011).It suggests that this Porkopolis is one where thousands of people are made to toil within a model of animal life.

A TOWN OF GHOSTS

Readers familiar with the rural Great Plains may recognize ghost towns as a frequent figure in conversation—and perhaps for good reason. Trips to cities take residents past boarded-up Main Streets and dilapidated homes that suggest grinding poverty and loneliness for the few who must remain once everything else leaves. Mentions of ghost towns recall the region's recurrent histories of settlement, slow bouts of depopulation, and abandonment in the face of an arid geography that can be hostile to many of agricultural capitalism's key life forms (LaFlamme 2018; Worster 1979). I know no better way to encapsulate this rural predicament than to tell the story, or at least the one I was told, of how pork corporations first entered Dixon and its vicinity. Facing the loss of small-scale manufacturing facilities and jobs, much as the rest of the United States did in the 1980s, the town council hired a rural business developer. Despite diligently searching for well-paying factories and dairies that

could stem the flow of residents moving to cities for work, he came back with only three options. Representatives of just a few industries would consider relocating to this sparsely populated and remote area: private prisons; a nuclear waste facility; or an industrial pork installation. Opting to pursue the more familiar agricultural option, the town's residents voted to make what a friend called "a Faustian bargain" and allowed their home to become host to what is now amongst the planet's densest concentrations of nonhuman mammal life.

After the closing of most of its manufacturing facilities in the late 1980s, the town of Dixon shrank from ten thousand people to an aging population of 7,500. By 2010, however, the town was bustling, with a population estimated at between twelve thousand and sixteen thousand people. The wide discrepancy in population numbers that were recounted to me is due to Dover Foods' 60–100 percent annual turnover rate across its operations, the growth of surrounding enclaves and hamlets, and the unreliability of census figures in a boom-town setting where migrant workers clandestinely pack into trailer homes because of a shortage of affordable housing (see also Stull and Broadway 2013; Shapiro 2015; Stuesse 2016). When running at full capacity, Dover employs approximately two thousand people on the "plant side" (slaughterhouse), two thousand on the "live side" (farms), and five hundred more in an array of "support functions" that can range from grounds maintenance to trucking routes. This is in addition to some 1,500 other people employed at internationally significant pork firms and subsidiaries for processing hog parts. Some would argue that these paychecks support much of everything else, from retail to government. But even they are the tip of the iceberg—or so I learned—in terms of how industrial hogs have been remade to absorb human activities.

When I moved to the town of Dixon, I initially heard that stock phrase about ghost towns as a statement of corporate dependency, one riddled with weariness about living in a company town. Everything that surrounds us is tied to hog production, it suggests, and everything could disappear with shifts in the price of oil and grain. Public life ignored divisions between work and home. Dover Foods was the sponsor of every event. Radio djs lauded the company's reliable jobs, pay, and medical benefits. People shopping at Wal-Mart wore the Dover Foods insignia on their T-shirts and the puffy winter jackets they used to keep warm in the cold meatpacking plant. I came to recognize the managers because they wore these crests as badges of identity on their crisp green oxford shirts, signaling that they are freshly starched embodiments of the corporation's values, whether they are cooking pork burgers at charity football games, attending church, or socializing with friends at a

bar. Workers' company-sponsored clothing was often more disheveled, reflecting the pressure of long work hours matched with the parental demands on the young-bodied people who disproportionally endure meatpacking disassembly's "grueling monotony."[8]

Worries about corporate desertion would flash up at unexpected times. Friendly conversations at bars would be punctured by semi-joking threats, such as when a burly middle-aged white biker cut me off and said, "My wife works as a secretary at Dover Foods. If you write anything bad about them, I'll drag you outside and beat your ass." I was surprised, during an interview, when a Dover transportation manager initially ignored my questions about the technical challenges of shipping hogs. He insisted that much of his time was spent managing company appearances. When he was hired, he tried to reduce operating costs in his department. His strategy was to prioritize maintenance on the functional innards of company-branded trucks over their shiny exteriors. Within weeks, his office was getting angry calls from people who had spotted a dent, or a recycled pink replacement bumper, as those trucks drove through town. These residents thought Dover had ceased investing in its infrastructure and all the hogs were soon moving elsewhere.

When I started what would become twenty-seven months of ethnographic research, between 2009 and 2013, such flashes of sympathy and interdependence with the state of "the hogs" took me by surprise. I had expected to find the simmering rubble of what Richard Horwitz (1998) dubbed the national Hog Wars in reference to the ferocity of resistance that marked small farmers' confrontation with pork corporations. In the 1990s, newspaper articles and scholarly reports from rural places across the country were filled with notes recounting strife among neighbors, fecal stench, water pollution, the rediscovery of agrarian values, and—in an otherwise important debate's low moment—white nativist fretting about workers of color arriving from around the world (see also DeLind 1995; Halverson 2000). Out-of-the-way places such as Dixon, along with a handful of other pockets of industrial animality stretching from North Carolina to California, came to occupy an outsize role in how a food-conscious urban public imagines the current state of rural life and the ethics of eating. The quantity of books that depict scenes of epochal confrontation between "family" and "factory" farmers is stunning, such that Carolyn Johnsen's (2003) dust-jacket claim captures the spirit of that time when it states that corporate pork constitutes a definitive "struggle for the heart and soul of rural America."

My intention is not to belittle such convictions, even if I am skeptical of the exclusionary premises behind the idea that white farmers are the indispens-

able backbone of rural life or that there is a fixed and currently existing "heart and soul" to rural America. I even admit that similar kinds of sentiments are what first drew me to look for places like Dixon. This book was motivated by wanting to make some kind of contribution to the tight-knit agrarian community in Canada where I grew up. In the early 2000s, that region was taking on larger quantities of confined animals, and its bases of life and livelihood seemed to be changing. I attended graduate school in anthropology in part to search after places that—however naïvely, in retrospect—may forecast what my childhood home could one day become and learn from those who have refused to acquiesce. So when I arrived in Dixon, my first move was to call the older generation of antiagribusiness activists—people who I also figured would gladly speak with an outside researcher not from these parts.

These countryside residents, who had lived here their entire lives, waged a battle over the materially and symbolically overwhelming stench of hog manure. A generation of grandparents, they wrote op-eds that developed vocabularies for enunciating the horror of breathing vaporized hog shit. They posed for photographs wearing gas masks on their lawns, portraying the outdoors as an uninhabitable zone. They organized community forums and lobbied the politicians who gave tax breaks to pork corporations and relaxed environmental standards for manure pits. They brokered alliances between ranchers and environmentalists while educating distant communities about how industrial hogs remake sociality and ecology. I had a dozen names that I had gathered from old newspaper clippings at the local library. Some had died of old age. One was now a recluse, holed up on his ranch. Another told me that she was about to take a vacation every time I called over the course of two months, gradually making clear, in the politest of ways, that she did not want to meet with me. One person finally picked up, and, to my relief, invited me over for sweet tea the following afternoon.

When I left my motel the next day, I drove along the bustling old-timey Americana main street. Thinking of that motto about ghost towns—and the eye-opening yet reductive way it makes you look for "the hogs" everywhere—it is strange to recall that everything I saw through my windshield can be traced back, if you try really hard, to the meeting of human muscles and pig metabolisms. There were the Guatemalan-owned clothing stores and Burmese fruit markets that tend to open from 4 p.m. to 10 p.m., only after first-shift workers were released from slaughterhouses and breeding barns. This route passes near an elementary school where children speak a total of twenty-six different languages, and side streets where South Sudanese refugees organize Dinka street

dances and festivals on select weekends. The path crosses a barnlike banquet hall that is a key destination on major Mexican *cumbia* bands' touring schedules. Along the highway, I drove past fuel stations strangely adorned with signs that read "100% Gas," which I would later learn advertised that the vendors refused to blend corn-based ethanol into pumps, as this increases the cost of animal feed. As I continued into the countryside, past mile-long sprawling trailer parks, squat silver confinement barns appeared on the horizon next to gravel side roads buried in cornfields. But with the exception of a pink snout sticking out of a truck, on its way to slaughter, I never did see a single intact, living pig outside. Traces of industrial hogs were everywhere and nowhere. They undergird a thriving rural locale that is at once cosmopolitan—a place bursting at the seams with diverse lives and ambitions, portending radically other senses of what rural America could yet become—and a palpable expression of global dispossession and injustice, reflecting how people from other countries are disproportionately displaced for the mere privilege of earning a living (Miraftab 2016).

I pulled into the lane of a modest country home. Tall fields of grain ready for harvest engulfed the surrounding property. The blinds were drawn on the glass front door. A blue plastic bag was hanging on the doorknob; a $5 bill and a yellow note was stapled to its front. The note apologized for wasting my time. The money was for my gas. The note's author claimed the corporation had become too powerful over the years and could refuse to buy their crops.[9] This former activist had decided they did not want to further risk their family's livelihood by becoming part of new media scandals. Inside the blue plastic bag were some weathered anti-factory farm booklets distributed by the Sierra Club in the 1990s. The note explained that these booklets had once been helpful as this person tried to learn what their home was becoming. Their pages' dog-eared corners indexed decades-old struggles that now felt buried, subdued to waning memories and hushed voices in diners among close friends.

The terms of my research would change shortly after that nonencounter. In the years to follow, I would shadow Dover Foods' managers during their routine workdays across most stages of pork production while participating over eight months in post–World War II manufacturing theory classes with corporate executives developing new epistemologies for mass-producing pigs.[10] I worked as an entry-level laborer in the artificial insemination and birthing departments for another company, Berkamp Meats, and assisted an esl (English as a second language) class for Karen-speaking Burmese refugees working the midnight sanitation shift at the slaughterhouse. I lived and

volunteered for a summer in a homeless shelter that housed people from a dozen countries who were newly employed in the slaughterhouse and were awaiting their first paycheck, and I was selected for a yearly Chamber of Commerce program that taught a dozen future community leaders about the rural economy. This was in addition to more fleeting senses of place garnered from residents during conversations at town social clubs, churches, bars, and public events. But I still think that short note suggested more about what it means to live amid industrial animality than I would subsequently glean from in-depth conversations over the course of nearly one hundred interviews.

The former activist and their fellow generation of farm families had waged an agrarian campaign in the name of their property rights—symbolic of their land, their place, their home—against disruption from the invading stench of industrial hogs on neighboring land that was quietly purchased by corporations from banks and estate trusts.[11] Their story is similar to that of others fighting through the courts using nuisance suits against all-encompassing odors. Many have lost because of the invisibility of scent and the use of "right-to-farm" laws that were originally supposed to protect small farmers from the complaints of encroaching suburbs (DeLind 1995).[12] I do not recall smelling excrement lingering in the wind at that exact afternoon moment (but see chapter 1). But "the hogs" were there. They were tied up with this person's livelihood—helping motivate crop choice and growth in their farm fields—such that the working, embodied actions of even prior generations of activists had been yoked to become interdependent with hog diets and metabolisms. This former activist's everyday actions, the farming practices their family had done for generations, had been converted to fulfill one dimension of industrial porcine nature. As the note described the corporation, it was a force that had become too powerful, its control in this case mediated through the diet and digestion of a species whose presence and territory extends beyond its body and biological substance.[13] At that point, I had never encountered one of Dixon's individual hogs in the flesh. But sitting in this person's driveway, it became clear that I was already *within* the industrial pig as a model.

The idea of this former activist looking out through the kitchen window still bothers me. I picture them gazing at their grain fields. They would see on the distant horizon the confinement barns that would consume every kernel. I imagine that it must be hard to sense in their property—and even in their own physical, laboring actions of planting and harvesting—the corporate hogs they fought for years. But my nonencounter with this former activist also suggested the need to think outside inherited scripts to write about what

it means to live in this Porkopolis. The period of agrarian rediscovery and resistance to corporate agriculture was subdued long before I arrived in the area. The journalists and organizers had left. A book-length account of family farmers defending their tacit community values has become a hard one to tell ethnographically, in locals' own words, at least from this very specific part of the world. But other kinds of stories can and should be enunciated from this place, one where animal agribusiness is a tensely habituated fact of life after being active for almost thirty years.

What I am about to write may frustrate the kinds of readers who are versed in agrarian food movements. I also worry that these words will offend some of my most cherished friends from Dixon who lived in that region long before Dover Foods arrived, and who are normally granted exclusive authority by visiting writers to speak for the culture and values of the place as a whole. But after corporate pork production has been operating within swathes of the rural United States for almost three decades, we need new narratives that reject the hierarchical binaries that have structured some of this debate. We might try to imagine what possibilities emerge beyond the dyads of "natives and immigrants," "farmers and workers," and even "human and animal." Once there are relatively few individuals left that are positioned purely outside agribusiness, what remain are different intimacies and intensities of relation to industrial swine. Once the actions of even ferocious former activists are compelled to feed into industrial animal models, it becomes much harder to write with the clear moral crutch of either heroes and villains. However, what remains is something perhaps more honest: how people in this town, like so many of us, struggle within and against things they are a constitutive part of but do not know how to change. The rub is that after that failed meeting, I could not go anywhere without sensing traces of hogs entangled with rural aesthetics, landscapes, architecture, and bodies. Those confinement barns suddenly appeared porous. I came to see the routine actions of everyone in the region, in some manner, placed in working relation to hogs. Their lives were *converted into providing labor* to the industrial pig. If it wasn't for the hogs, after all, this would be a ghost town.

During the years that followed, other residents taught me their own ways of sensing intimate ties to living and dead hogs, as signs of industrial animality came to manifest within more than soils, grain fields, or gas station pumps. Some people can anticipate both subtle and intense waves of fecal stench as a dimension of local seasonality, distinguish among rendered substances in the slaughterhouse based on their scent, or develop anesthetic capacities to

ignore all this olfactory surplus. Others have trained their senses of observation to perceive how accumulated residues of tens of millions of slaughtered hogs' diseases circulate through the landscape, infrastructure, and workers' homes (part 1). Some try to feel the dense emissions of porcine pheromones they believe provoke human desire, and I encountered workplace situations that reflect how human sexual hierarchies are being remade amid attempts to engineer hogs' reproductive instincts (part 2). Human racial and gender tropes were becoming naturalized into porcine musculoskeletal systems, and pharmaceutical regimentation of hog hormones had become tied to the kinship rhythms of daycare schedules (part 3). With time, I came to learn how remnants of dead pigs and repetitive motions are preserved in the muscle contours of workers' bodies and how doctors' offices have become pivotal sites for the profitability of capitalist pork (part 4). Even today—writing from the alternative food hub of Somerville, Massachusetts—living in Dixon makes me perceive traces of hog substance in my computer processor, on gelatin-coated pages of my essays and photographs on my wall, and in my medicine cabinet (part 5). I cannot write this book—it is possible that I cannot type this sentence—without touching dead traces of industrial pigs. The specific model of making and taking animal life developed in the United States means these factory farms are invisibly alongside us at all moments, and our routine actions are made to circulate through these Porkopolises in minute ways.

We might say that Dixon is already a ghost town—though a different type from the one meant by the motto. Since its founding, more than 100 million hogs have been conceived, born, raised, killed, and cut to pieces in this place. Each new piglet body born into this region carries records of those killed. Over the course of almost three decades, traces of now-dead hogs have been built up in physical landscapes, in microbial ecologies, in workers' muscle memory, and in ways of thinking about what the world can offer. This is a fragile place that is challenging the integrity of the porcine species through the historical weight of past diseases and rounds of engineering at the same moment that it is a test ground for replication elsewhere. These agribusinesses are at once spaces for making pork—for raising individual hog bodies—and for the ongoing development of durable models of industrial animality that are being refined with each and every butchered carcass. And those models, which remain largely unbothered and unchallenged by agrarian alternatives and urban food movements, are being exported around the globe in distinct forms to Asia, Latin America, and Eastern Europe (Dunn 2003; Lowe 2010; Schneider 2015).[14] It is possible that, years from now, the town of Dixon will

host far fewer human inhabitants. But its peculiar histories and struggles over labor and life may still endure across the planet.

UNENDING UNIFORMITY

This would not be a popular thing to say in this conservative place, but it should be underlined: what the local motto elides is the way Dixon contains the husks of other ghost towns. Its agribusinesses first managed to run at capacity—that is, they were able to find enough willing people to populate working shifts—only after the American recession of 2008 decimated working-class communities on the coasts. More fundamentally, places such as Dixon are enabled by agricultural policies that prioritize cheap meat to subsidize the meager wages of post-Fordist urban service jobs and that, in turn, have led to the bankruptcy of thousands of farmers across the country (see Guthman 2011).Between 1992 and 2009, a period in which Dixon was increasing its inventory of hogs, the number of family-owned pig farms in the United States plummeted by more than 70 percent as the scale of corporate farms outstripped domestic demand for meat and the cheap price of overproduced animal bodies, matched with rising feed costs, made it difficult for smaller farms to subsist (see also McBride and Key 2013). Like other major and minor farm crises that evacuated the U.S. countryside over the twentieth century, this "industrial restructuring" is really a story of people being dispossessed of their homes (Dudley 2004). Dixon's concentration of swine life and death is therefore not just a technical and scientific achievement. It is also a product of a political-economic system built on cheap food that has allowed corporations to gain near-monopoly control over the porcine species.

Companies such as Dover Foods are a significant factor in farmers' dispossession and precarity across the United States. But its day-to-day operations are also, if paradoxically, a consequence and outgrowth of cheap meat. This corporation is one of a series of companies that are trying to create distinctions within industrial forms—unique kinds of "factory" farms—to lessen low profit margin pressures they themselves had a role in creating. While plotting this book, I spent a summer visiting potential research sites across the United States. I met with animal science professors and asked them where to find the most "industrial" of industrial pork. North Carolina hosts the world's largest slaughterhouse, with a dual disassembly line that butchers thirty-two thousand hogs per day. Utah contains one of the largest breeding farms in a single barn, giving it the most "concentrated" concentrated animal feeding

operation, or cafo (the government term for indoor confinement). Colorado, Kansas, Missouri, Nebraska, Oklahoma, and Texas had all seen cafo s sprout up in the 1990s where few hogs had previously existed. Japanese- and European-owned farms offshored their production to these locales, and they are touted as owning the most advanced buildings, with electronic chips inserted in sows' ears and computerized hog feeding. Across the traditional hog-corn belt of Iowa, Minnesota, and Illinois, family farmers with growing animal herds were compelled to reorganize as limited liability corporations that pool resources and limit legal culpability for pollution of their communities (Ashwood et al. 2014).

What became clear is that there are many kinds of animal agribusiness operating today, each with distinct strategies for accumulating profits in the face of cheap meat. But they emerge from a common moment of reindustrialization. Scholars' accounts frame the rise of the pork cafo as rooted in neoliberal corporate welfare schemes combined with environmental and labor deregulation policies that lured the industry away from its former nucleus in the Upper Midwest.[15] Local and state governments crafted special agricultural exceptions to environmental and nuisance laws, pushed right-to-work legislation to weaken the efficacy of labor organizing, and provided tax increment-financing incentives for corporations to relocate and build their infrastructure at reduced cost. Often articulated as an imitation of the chicken industry's restructuring in the 1950s and '60s,[16] meatpacking or feed milling corporations found a limited-risk entry into raising pigs by contracting with farmers who were struggling following the market collapse of other agricultural commodities (often tobacco [see Benson 2011]).These corporations provide "genetics" (semen or piglets), feed, technical advice, and purchase price floors to the farmers. The farmers are responsible for the land, buildings, and labor and for meeting the specifications of the contract (see Page 1997; Rich 2003). From 1987 to 2007, contracting shifted the pork landscape of the United States from a group of diversified small to midsize farmers who raised hogs outdoors as a buffer alongside grain crops to one in which only four corporations came to coordinate at least 64 percent of the national pork output (Hendrickson and Heffernan 2007).[17]

When Dover Foods entered the economically depressed region of Dixon in the early 1990s, it had its own strategy: it wanted to achieve the "full" vertical integration of an animal. Broadly put, and though it is hardly unique in this regard, this means that it wanted to directly own and engineer every stage of the pig's life-and-death cycle. It merged historically separate industries such

as swine genetics, boar studs, sow insemination, hog growing barns, feed mills, slaughterhouses, and post-kill processing facilities. It has done so with few subcontracted farmers, unlike some other corporations, owning the vast majority of the land and buildings itself. Dover Foods now derives revenue from nearly everything that goes into or comes out of the porcine species while operating almost exclusively on the wage labor of thousands of migrant workers (and migrant managers from other parts of the country). Not only does this one corporation own 1,200 hog barns, scores of feed mills, and some of the world's largest slaughterhouses, but it also appears to be trying to construct a closed-loop system powered by porcine substances themselves. Dover Foods converts fat into biodiesel to fuel trucks; it recycles porcine blood into plasma for feeding piglets; and it captures energy from methane in hog feces to provide energy for barns and slaughterhouses. From the outside observer's view, the company has constructed a model for industrializing porcine vitality itself.[18] Dover Foods has used vertical integration to complete an odd sort of closed loop bioindustrial system that at once makes and is made from the stuff of porcine bodies, in ways far more extensive than meat. This is not simply a matter of natural pigs being inserted into the machine of the factory—as many popular critics frame agribusiness logic (see Imhoff 2010). Rather, to push the analogy in another manner, the machine of this factory is being constructed through distinct biological elements of the porcine species.

However, what was striking during interviews was how Dover Foods' own architects tended to grasp this system of production as a largely unfinished project, one whose potential was not yet realized. Their ambition is not merely to derive new profits from each discrete phase of the pig's life-and-death cycle. Many planners instead insisted their goal was to change the economic nature of the American pig now that they own the animals across that cycle. Depending on where these architects were located along the integrated chain of porcine life and death—from artificially inseminating sows for more robust litters to making lung-based pet food recipes—they had different sensibilities about how to fulfill integration's promise. As I heard the chief executive profess his goal was to "build a [human] culture of integration" laminated over integrated hogs, saw company architects developing 200-node computer profit models within the modern pig, and participated in classes where gurus taught post–World War II Japanese manufacturing theory to help rethink industrialized hog biology, I came away with portraits of a biocapitalist experiment that is ongoing. The idea of the "factory" within this factory farm variously emerged in conversation as a telos or inevitable endpoint of industrial capitalism, a

company ethos, a prized aesthetic, an object of workers' resistance, and—especially—a matter of realizing (more) standardized life.

Cincinnati, the first place officially granted the label of global Porkopolis, was also known as the (plural) Empire City of Pigs (Wortley 1851). Its streets bustled with unique hogs. Residents going about their business would encounter an assortment of swine of distinct breeds, ages, sexes, shapes, colors, and temperaments (see, e.g., Bird 1856). Dover Foods' planners, by contrast, are searching for industrial knowledge and ways of seeing to enable a distinct kind of interspecies interface that would turn Dixon into what we might playfully call the (singular) Empire City of the Pig. Their goal is not only to generate millions of animals. At a moment when the profit margins of meat are very low—such that muscle sold in the United States, rather than circulating to higher-paying export markets in East Asia, is often treated by this company as a lost opportunity—the corporation is dedicated to increasing the value of the (industrial) porcine species through the unending pursuit of more bodily uniformity relative to its industrial competitors. Standardized life can reduce labor costs by enabling more machine-driven automation in slaughterhouses; its outputs can fetch higher prices on global wholesale markets; it generates biochemically consistent animals to build more commodities from their bodies; and it promises to serve as a model for replication elsewhere. Dover Foods is developing technics for turning diverse pigs into "the pig"; it is striving to transform actual hogs into tokens of an increasingly interchangeable capitalist animality. The goal of this ambivalent project—which is at once its source of current profit, ground for future competitive advantage, a source of interspecies violence, and an ecological threat—is to realize a capitalist species more homogeneous than any other in history and one that is capable of becoming unendingly more uniform over time.

At its broadest, then, *Porkopolis* is about the cultural politics of maintaining systems of industrial production in the United States, along with, following the lead of the anthropologist Cori Hayden (2012), the unending and never-quite-complete work of making things the same (Dunn 2004; Lampland and Starr 2009; Timmermans and Epstein 2010). In this sense, one might detect that the idea of a factory farm that I propose to develop in this book is more elusive than its standard liberal representation as a calculating site of short-term corporate profits, death, and exploitation.[19] It is some of those things. But the rush to itemize factory farming's socio-ecological harms can mask other

tensions in American animal agribusiness. Within their boardrooms and at their worksites, many of these companies are motivated by an almost utopian sentiment to maintain pockets of intense static uniformity amid a broader planet that is increasingly restless—from erratic changes in climatic patterns and shifting borders and boundaries to capitalism's dizzying transformations of popular tastes and technologies (Berman 1983; Brown 2010; Morton 2013).

Moreover, at the planning stage, corporations such as Dover Foods are distinguished by a curious kind of reflexive industrialization. They are explicitly, literally, and often quite consciously trying to realize a "factory" farm. These organizations strive to translate industrial categories—such as "machine," "worker," and "manager," or buzzwords from the high industrial 1920s such as standardization and vertical integration—onto diverse workplace practices, pigs, and people (see Fitzgerald 2004; see also chapters 2, 4, and 8 in this volume). One project of such companies, in other words, is the construction of a (cultural) model. They are taking up seemingly outdated twentieth-century industrial stock images, organizational forms, and identities to help them grasp hogs and their human caretakers as potentially (more) standardizable beings.[20] Dover Foods is at once an odd and logical project: an unusual site of renewed grappling over inherited legacies of twentieth-century industrial capitalism and a speculative yet sensible outcome of cheap meat. The "factory" farm in this book is thus not a mere metaphor. These companies are plumbing industrial forms to overcome the cheap life that prior industrialization has wrought.[21] Moreover, this book's attunement to this kind of reflexive industrialization is not merely an intellectual pursuit that comes without political consequence, irony, or contradiction. It is corporations' legal regulation as "agricultural" operations subject to special exemptions on nuisance, air pollution, trucking, and labor laws—outside, at least, of the slaughterhouse stage that is legally regulated as "industrial"—that allows them to develop in the manner that they have unfolded in the United States over the past thirty years. The very category of the industrial emerges in these corporations as a matter of simultaneous desire and denial.[22]

In turn, at the level of execution, the worksites that compose mass-production are spaces where people are relearning the nature of domesticated American animal life. For the "things" agribusiness architects are trying to industrialize are not just the textures of hog muscle and fat in isolation. They include an expanding array of chemicals, minerals, microbes, machines, environments, nonhuman beings, and, especially, human labor practices that go into modern

meat and make up pigs in the flesh. Standardizing pigs entails the concurrent standardization of all their relations.[23] While vertical integration is formally defined by corporate ownership and control of worksites, in practice it means an increasingly fine-grained division of labor across the porcine life-and-death cycle. Planners in these agribusinesses are engineering—principally by organizing human laborers' actions ever more finely through—the distinct muscles, fats, organs, bones, viruses, diets, semen, hormones, social hierarchies, instincts, perceptions (and so forth) of hogs. The industrialization of life and death is an ongoing process, shifting and responsive to the changes that it generates within porcine vitality itself. Indeed, we will come to see the American factory farm as a tense project in practice as well as conceptualization: its architects seek to create a uniform material and cultural world even as their attempts to manifest such aspirations within diverse pigs' biologies and behavior generates emergent forms of ecological flux, workplace strife, and intimate, even potentially radical, interspecies relationships. Achieving unendingly more standardized life—trying to further industrialize an organism that has been the subject of some two centuries of industrial transformations—is a project that is so totalizing and fine-grained that it creates its own instabilities.[24]

To put all of this in simpler terms, the (re)industrialization of pigs has come to require intimate and intense qualities of labor. At their most basic, the chapters of *Porkopolis* are about what it means to work (and be a worker) amid shifting worlds of industrialized porcine life. In other words, this book builds through analysis of the mundane things that people skirmish over in agribusiness workplaces.[25] They include many of the usual conflicts that one encounters in sites of industrial labor: control over the terms and process of work; wages, skill, and human dignity; the power-laden effects of adopting new technology; contested hierarchies of race, class, and gender; and what it means for diverse people to identify and act collectively as workers.[26] But there are limits to treating these sorts of places as industrial sites that are indistinguishable from any other. Following Timothy Pachirat (2011), it can matter that the objects (and sometimes subjects) of industrial production are not inanimate tires but living, sentient animals. Minimally, the politics of labor in these sites rarely tend to be about human labor alone—an egalitarian or even utopian factory farm in terms of worker remuneration or labor justice is still a fraught one (see also Wilderson 2003). They are equally about how the state of animal life conditions work. The chapters of this book thus

ask whether inherited visions of transcending industrial capital via purely human-centered labor politics are adequate to agribusiness.

In addition to these endemic tensions of capitalist production, animal agribusiness entails topics that we rarely find attached to analyses of labor struggle: how people seek to achieve "the factory" and realize industrialism as an end; the ethics and limits of human labor itself; how to gain knowledge of nonhuman beings' nature; and how one might live as a more ethical person in spaces that are organized through the engineered vitalities of pigs. The vast majority of books on animal agribusiness suggest that one has to make a political choice between caring about the state of either "workers" or "pigs"—an anthropocentric or animal-centric epistemology (see Blanchette 2018). Part of this book's point is to show how the twenty-first century evolution of animal agribusiness has made that distinction untenable. As a more general reflection on industrial capital in times of environmental peril, *Porkopolis* articulates how struggles for labor justice and dignity are inseparable from the conditions of (nonhuman) vitality with which they are intertwined.

To reiterate my argument, in extended form, it is that agribusinesses have created a prolific yet fragile type of porcine life whose maintenance at massive scales has come to foment the transformation of facets of human existence in its image. This Porkopolis is a place where what it means to be a working human or an individual hog is inseparable from the broader state of industrial animal life that encompasses them both. Industrial animal biologies condition and mediate multiple dimensions of human life and labor, including regional class and race relations, forms of kinship, out-of-work sociality, working dignity, mental well-being, human bodily integrity, and ideologies of individual autonomy. This should not be read, however, as a unidirectional story of domination and degradation. Instead, as workers confront distinct types of industrial animals ranging from boars to carcasses—and across scales that extend from the care of one tiny injured piglet body up to the residual diseases of 100 million hogs—this very process depends on cultivating kinds of craft and care with pigs that are not so easily controlled by corporations. We might say that the political stakes of examining labor in the factory farm's worksites are about more than just developing a critique of the making of disposable meat, however problematic that may be. They are also locales of brewing struggle over and amid the shifting state of American industrial animality—including that of human animals—that has consequences for diverse communities as versions of this model are gradually being adopted across the globe.

AMERICAN ANIMALITY IN A BARCODE

"In a philosophical sense, full vertical integration would include everything from photosynthesis to the person eating the food." The speaker of this statement, sitting in his glass-walled corporate office hundreds of miles from Dixon, was named Drew Collins. He is best glossed as Dover Foods' lead architect of vertical integration. A tall, blond man in his mid-forties, Collins wore a pair of pressed khaki slacks and a blue Dover Foods oxford shirt whenever I saw him touring pork production sites in Dixon. He was politely reserved, with a calm emotional keel. Raised near farms in the Midwest, though without the capital to afford farmland of his own, he had saved up to purchase land after becoming an executive at Dover Foods. On weekends he retired with his family to their small corn farm. "I guess you might call that ironic," he said to me with a sheepish smile. Few would guess that this man's planning—more than that of any other person I have met—can reshape domesticated animal life.

Full vertical integration would include everything from photosynthesis to the person eating the food. Collins's wording is playful—an impractical, "philosophical" aside. Upstream, full corporate ownership of the hog would extend through its diet and metabolism into the processes that compose sun-infused plant life (Myers 2016). Downstream, it does not stop at the branded, braised piece of hog shoulder served on someone's plate. Full integration extends beyond meat into the very appetites and biology of the end consumer. Going to this outer limit involves the remaking of populations' desires in ways that are more amenable to corporate animal production and perhaps even capitalizing on human digestive waste. Collins's point was that "full" vertical integration of any animal species is a near-infinitely complex proposition, an ambiguously utopian and dystopian project. Yet his words are important because they underline how this agribusiness's commodity is not the isolated porcine organism. Collins is not working on the individual creature that comes to mind when I imagine a hog sitting in a barn. His planning centers on the total assemblage of things that make up present-day hogs in their actual flesh (see Guthman 2019; Haraway 2008). Collins is an engineer not of animals but of capitalist animality.

Collins occupies a unique position in the corporate structure. He is the only employee responsible for in-depth planning of production across every single phase of the pig's (pre)life and (post)death cycle. A slaughterhouse worker might make a similar slice of the right ham many thousands of times

per day. Farmworkers in artificial insemination arguably have a more profound tactile knowledge of sow reproductive instincts and sentience than any animal ethologist. Others will nurture hundreds of thousands of animals aged from day one to twenty-one in farrowing barns, witnessing scores of variations of what it is to be a piglet—but seldom seeing a grown hog. Virtually every nonmanager's labor is embedded in one age grade, working type, biological function, or anatomical part of the porcine species. Even among those managers, fewer than a dozen oversee more than one short thread of life or death. And aside from one feed commodities buyer, some nutritionists, and the chief executive, few people beyond Collins cross the chasm from porcine life to death, or from death to life. If the classic image of the small farmer is someone who nurtures an animal across its entire life-and-death course, then Collins is one of the last people in this company who approximates that role. He is among the final farmers remaining in this system.

Collins would put his job differently. He liked to say that his role was to "find new money in our pigs." Passed down over the years, this catchphrase reflects how accountants conceived the operation. Armed with an excess of capital from other ventures, the company saw the American hog of the 1980s as an undercharted realm for revenue extraction. Collins identifies dimensions of the pig's life course, along with its post-death bodily substances, that might merit deeper investment. He once found, for example, a gap in the amount the corporation was paying for plasma to feed to baby piglets compared with how much others would pay the corporation for raw blood. He used the data to convince the chief executive to purchase centrifuges that allow Dover to recycle blood to nourish its own piglets.

Dover Foods recruited Collins in the 1990s after he developed a model to analyze how feed ingredients in a boar's diet affect the potency of its semen. While working at Dover Foods for more than a decade he expanded his program to incorporate more dimensions of the porcine species. As of the year 2010—and it is likely even more complicated today—the result was a roughly 200-node profitability model that analyzes dynamic parameters such as the prices of various feed ingredients and their substitutes, fuel prices, endemic diseases, drug usage, labor costs, and that week's ideal slaughter weight ("283 pounds"). The program treats the animal's life-and-death course—across boars, sows, piglets, hogs, carcasses, and substances—as one unified product. In other words, this is not a model based on the profitability of meat hogs' muscle substances alone. It operates at the level of the industrial species in its entirety; it incorporates cost variables across

every type and stage of pig life and death that Dover currently owns, from genes to viscera.

"We are moving through the knowledge age of pork," Collins memorably told me one evening in a hotel bar, after our biweekly class in manufacturing theory, when "pork production is becoming transparent to all sectors of the food chain." Dover Foods' customers—and "customers" are not those who buy pork from grocery stores but wholesalers who process body parts into products such as branded bacon[27]—were demanding information about the technologies and events embedded into tenderloins but not measurable based on the sheer physical flesh quality (e.g., pH levels or water retention). I smiled to myself at the implication that even I, as an anthropologist, was being absorbed into a node of Collins's model; that how industrial hogs are discussed can affect their value.[28] I heard his statement partly as an acknowledgment that undercover videos of animal abuse and reports concerning animal farming's role in intensifying human antibiotic resistance were becoming risks to the corporation's ability to maintain profits. But his main point was to underline one of Dover Foods' convictions: that vertical integration, standardization, and direct ownership of the pig's existence is itself valuable. As the lead Dover salesperson once put it, integration is "what allows us to tell the Dover Foods story and give our customers a type of guarantee" that the company had directly dictated every single feed ingredient, drug, and event that affects the pork. The model itself was becoming a brand, and control—even if only partial—was emerging as a key source of distinction and value.

Recounting how he developed the knowledge age of pork while giving a presentation at a college, Collins slowly built up to his description of the pivotal slide of his lecture. But his PowerPoint image that purported to reveal the future of global animal agriculture was not, at first glance, a very captivating one. The next generation of animal flesh was a vacuum-sealed pork chop, with a sticker of a barcode affixed to its encasing plastic. Once scanned, he explained, this barcode of the future would describe "everything that goes into our product." Suffice it to say that this was not the type of hushed conversation that I pictured myself having in a dark tavern booth while researching American agribusiness companies. But I want to stick with it. The kind of thinking that underlies this barcode also underpins this book. This desired barcode illustrates the everyday managerial travails of agribusiness in late industrialism (Fortun 2012). And it provides a window into a politics of totality that rests at the very core of how agribusinesses are coming to remake places and people through the porcine species.

Perhaps the future barcode would include the hundreds of foodstuffs that a given hog ate, its various illnesses and treatments, or a range of genetic information detailing the qualities of its parent boar or sow. Maybe it could list the labor processes and the kinds of people that shaped the animal. Collins's barcode was part of a theory that total knowledge of porcine existence—a fully standardized and known life form, which one corporation had carefully overseen through its every expression of life and death—was becoming a route to value in terms of keeping customers' faith in the product and charging a premium. What is important to note is that Collins's barcode is not a register of the day-to-day life of any actual animal. The barcode's informatics would display a reflection of the experiences of a generic hog. Such a hog would embody the statistical mean of experiences, genetics, feed, or living conditions that adhere across Dover Foods' animal herd as a whole. This is one version—one reading, one way of materializing—the abstract capitalist animality that vertical integration portends but one can never see at any given site. The challenge of standardized life is to decrease variation around this mean; it is to more closely match the experiences of every single individual pig onto this abstract statistical animal. For instance, I doubt the barcode would include information on the time that I worked with a sow that was suffering from a bulging rectal prolapse that blocked her birth canal. We shot her in the head, tore open her uterus with box cutters, and "saved" her piglets with mouth-to-mouth resuscitation (see chapter 6). The barcode would not declare that a key ingredient in those pork chops is workers' breath. Its point is to imagine a system in which there are no such rare events.

The scanning of a barcode projects a sense that Dover Foods has deep knowledge of the porcine species while promising a future in which it will control the nature of the pig even more in the integrated system. Thus, the knowledge age of pork—signaled by scanning a barcode to encode all of industrial animality's 200 factors—is made imaginable by vertical integration, but it also makes evident the gaps in integration as a horizon of total knowledge. The challenge, of course, is not to "fully" integrate the pig, or to achieve absolutely perfect uniformity. It is to be more integrated and standardized than any other company. "Vertical integration is a mentality," I was often reminded by Dover Foods' senior managers. Many of their competitors own the farms, the feed, and the slaughterhouses. But they treat them as separate profit centers. Cardinal Packing's farm division will be encouraged to sell live hogs to a rival packing company if it can get a better price. Dover Foods' managers were adamant that this lack of an integrative ethos is not "real" vertical inte-

gration. "What I love about vertical integration is that I don't have to think in terms of my own little world, my single department," a transportation director told me in a trailer where he coordinated drivers. "Vertical integration allows me to treat our animals as a single unit."

I fixate on Collins's barcode for a few reasons. The first is because it is just such a managerial technology that allows him to grasp seven million hogs as a "single unit." Second, the kind of move that this barcode represents also underpins this book's ethnographic organization. Third, the barcode serves as a reflection of the state of animal industrialization in the United States. What the barcode underlines is how the project of American animal agribusiness has become the tangible realization of totalities. Dover Foods aims to own all of the pig, use all of the pig, control everything that goes into pigs, derive profit from every moment of the pig's life-and-death cycle, and know everything that can affect pigs' bodies in order to produce extreme uniformity. It is tempting to read this monopolizing ambition as a sign of this company's unmitigated power. But it also reflects how companies are trying to find "new money" in pigs when little obvious room for capitalist growth remains.[29]

The word "totality" in academic writing usually refers to the gathering together of apparently dissimilar things to find a synthesis that transcends what seems obvious. It has flickered in and out of debates that range as widely as Marxist revolutionary theory, the promise of so-called big data, and efforts to think within "systems" that overcome disciplinary thought.[30] In this book, however, I am less concerned with totality as an intellectual idea(l) than I am with how it is put into practice and struggle. How and to what effect are totalities done; how are worlds made porcine in practice? Why do we see these kinds of totalizing industrialisms emerging in an ostensibly postindustrial United States? What are the limits and forms of resistance to this kind of thinking and practice with animals?

In one sense, this book should itself be read as an exercise in totality making. It engages in the (impossible) project of knowing "all" of the industrial pig; it tries to move across every moment of the modern hog's existence. In another sense, each section aims to offer a maximally coherent articulation of the logic of the factory farm as a whole. Each section relatively privileges the practices of one workplace class—including senior managers, low-level farm managers, farmworkers, slaughterhouse workers, and porcine entrepreneurs—as they articulate their relationship to actual pigs, industrial animality, and standardized life. In addition to the Barcode, the figures used to illustrate these struggles over totality include "the Herd" (part I), "Stimulation" (part II), "the

Stockperson" (part III), "the Biological System" (part IV), and "the Lifecycle" (part V). These terms are all drawn from the long history of American pig farming and take on new resonance as managers and workers reinterpret them amid shifting industrial conditions of porcine life and death.

All of this book's parts can also be read as *counter*-barcodes, however, because they magnify the many gaps that belie the achievement of a completed porcine totality. At the core of this method is the pivotal distinction between animals (actual porcine organisms) and animality (expressions of the entirety of the pig as a "single unit") that emerges as a terrain of minor class, racial, and gendered conflict with the rise of vertical integration. The (corporate) ideal of integrated pork production is one in which each site, manifestation of pig, and labor practice simultaneously cites all the other moments without fragmentation.[31] Figures such as the barcode are thus aspirational class-based discourses with power-laden repercussions in terms of who can articulate an abstract "industrial animality" over tactile labor with individual, actual pigs. Yet each site on the route from pigs to pork is one where different visions of animality emerge and oppositional notions of who can claim privileged knowledge over actual animals begins to take shape. In this sense, each section depicts skirmishes over the very nature of building this unified agroindustrial complex.

But there is a final methodological reason that I spell out the minutiae of Collins's barcode. What we need to remember is that the barcode is an almost stereotypically corporate revelation. It is mundane, normal, and thoroughly *unexceptional*. I do not see the ambitions toward totality in things like the barcode as marked *only* by all-powerful corporate machinations. I think they are equally symptoms of how these planners are pushing against limits of our inherited systems of accumulating capital. They are about trying to maintain industrial capitalism's hold on an overindustrialized organism. This should affect how we write about them. In opposition to certain popular journalistic tracts that aim to confront industrial food systems, this book's premise is that the narrative conventions of the liberal exposé genre that shapes most meat writing are politically inadequate for our contemporary world. Many popular books—with a key exception being Upton Sinclair's classic novel, *The Jungle* (1906), that used the Chicago meatpackers as a vantage point onto our shared political and economic life—frame animal agribusiness as underpinned by nefarious behavior and moral deviance that is outside of all cultural norms. They insist that factory farms are so exceptional, and exceptionally bad, that their practices could be corrected if only they were "exposed" to the pub-

lic. These factory farm exposés present themselves as radical interventions against power. But there is a kind of conservative tendency in this move. They assume that an ideal set of American moral norms and alternative agricultures already exist and use those images as a baseline for marking off corporate agribusiness's deviance.

Yet industrial meat *is* the American norm. And animal life has not been industrialized in the past thirty years; it historically has been a harbinger of industrialisms to come (Blanchette 2018). Henry Ford claimed to take his idea for the automobile assembly line from the Chicago meatpackers' disassembly line (Shukin 2009). Drug-aided human sciences of bodily growth and normative health are inseparable from efforts to industrialize animals' metabolism in the 1940s (Landecker, forthcoming). Ninety-six percent of American pork and chicken comes from an iteration of a factory farm, and these farms are globalizing at a rapid pace. What this book develops is an exposé of animal agribusiness not as an institution that departs from American cultural norms—as exceptionally bad and exceptional to regular, ongoing processes of industrialization in other places and industries—but one that uses the factory farm as a window to expose existing and looming American norms. I build across these pages not an exposé founded on identifying deviance but, instead, an *exposé of the normal*. These operations and their desire to realize lived totalities are what late industrialism might look like. Immersively tracing the lives and deaths of these industrial American animals, I suggest, can help us reflect more critically on the simultaneously powerful yet exhausted state of industrial capitalism more generally today.

This is also tied to the ethics of how one might represent the diverse kinds of people who have made their lives in Dixon and places like it. My frustration with the standard exposé genre is that it tends to position such places as a mere cautionary stop on the road. I think that is what people were telling me when they invoked haunting ghost towns. In exposé damage narratives, we gain fleeting glimpses of workers with repetitive stress injuries and stench-ridden environs that reduce these places to icons of pain and degradation.[32] Places such as Dixon, in turn, are then made to serve as negative narrative contrast devices for the visiting journalist's discovery of an inspiring, bucolic, and "normal" agriculture somewhere else. I share many of these authors' ecological, moral, and political concerns about the state of animal and rural life. I think that people's efforts to realize alternative American agricultures across cities and countrysides are courageous, important, and can make a profound difference.[33] And this book features no shortage of violence. But

one of my gambits is that more immersive, highly-detailed portraits of life and death within factory farms can feed the critical imagination to spawn visions of other, as-yet nonexistent, American agricultures. Another is that, after decades of living and laboring amid industrial animality, people who dwell in Dixon can offer more than proof of damage. Sometimes these pages will feature people trying to practice and express—however fleetingly or subtly—alternative political relations to animal life and human labor. At other times, they follow how people try to find their own ways to make a decent and worthwhile life for themselves and others in spite of it all. Regardless, this book stays squarely within and against the many worlds that constitute animal agribusiness, narratively intensifying both their ongoing traumas *and* the possibility of new kinds of rural existence that may yet foment out from within them.[34]

FROM PRELIFE TO POSTDEATH

"Part I: Boar" is about how the industrial pig has come to require constant work. Confinement no longer contains this animal. Maintaining the genetic potency of industrial boars has made managers appraise how pig diseases are intertwined with wind patterns, terrain gradations, and humanity. One result is that corporations are enacting biosecurity protocols in workers' domestic homes, a move that frames human sociality as a reservoir sheltering porcine disease. Workers' social lives and kin networks are reimagined as a threat to the vitality of industrial hogs in ways that subtly alter the value of human autonomy in this region. This part inhabits the abstract technologies that allow managers to become attuned to the industrial pig as a fragile and world-defining species in need of new types of laboring subjectivity while tracing the politics of class in a zone reorganized around industrial animality. In turn, it analyzes how people can be seen to be engaged in the regulation of pigs' immunity in their routine actions outside work, whether while sharing some wine or praying in a church pew. This part begins to develop, in other words, the ways that industrialism itself relies on—and tries to co-opt—practices of care and animal intimacy.

"Part II: Sow" is about how senses of animal nature are wielded to devalue human labor. It enlivens the industrialization of porcine instinct, written with an eye to how instinct has long been central to grasping the industrialization of human bodies. It is based on my experiences working the artificial insemination line. Workers are tasked with "becoming the boar," enacting porcine

instincts, by using their hands and bodies to imitate mating. These modes of building (human) labor practices through animality—of interpreting, acting out, and embodying sexual natures of swine—transform ideological impressions of instinct into terrains of gendered work and exploitation. Against theories that propose that the factory farm's task is to excise all natural "nature" out of production, then, I argue that each work phase is organized to magnify one expression of porcine nature at the expense of others. In particular, this part theorizes the kinds of interspecies and labor politics that are possible when people are intimate with only one dimension of pigs—in this case, reproductive instincts—and critically considers how companies attempt to manifest alleged *human* instincts to labor.

"Part III: Hog" examines how industrial pigs are overworked: both in that certain of their biologies have been engineered to work in overdrive and in that there is too much historical human labor coursing through their physiologies. It traces the labor of care and the politics of species as they unfold across the farrowing (birthing) rooms and growing barns. While the factory farm at this book's core exists to create a more standardized animal, refinements in sow genetics are creating litters that are too large to supply adequate nutrients to fetuses in the uterus. One result is litters that are emerging as runts. These runts are radically particular animals with ailments that workers must normalize within twenty days or the piglets will be euthanized. The part examines how "surplus" affect and capitalist intimacy is now required to save surplus pigs in ways that are both violent and redemptive for the people who struggle to find moments of craft and a broader way of life while working on these farms. To do so is both to take seriously workers' experiences and to query the limits of liberation via labor in this space.

"Part IV: Carcass" is about the vertical integration of human workers' bodies. It builds on a slaughterhouse manager's suggestion that, after two hundred years of industrial refinement, the disassembly line has reached the limits of the human body. It cannot go any faster without threatening acute injury, and the only path to increased throughput is a more standardized pig around which corporations could develop automated machines. In the year I arrived, Dover Foods added a health clinic for employees that ran intensive physicals in an attempt to test new hires' bodily condition and assign them spots on the disassembly line to minimize insurance claims. The clinic signals how the slaughterhouse manages discrete human biologies as a source of value in parallel and alongside those of pigs. This part thus articulates the joint commodification of animal biology across species while illustrating how factory farms

are beginning to cultivate a mode of industrialization that goes far beyond labor theories of value that have classically underpinned this mode of capital.

"Part V: Viscera" is about how we are all recruited to work on industrial pigs. It is based on a series of postdeath ventures that derive value from the slaughterhouse's biological matter beyond meat in the form of bones, feces, fat, livers, lungs, and animals that are "out of spec." Total absorption of the animal's physiological substances is usually treated as a neutral matter of rationality and good environmental stewardship. My argument is that we should view it as deeply political. Using "all" of the pig depends on making us (and other species) subsidize the factory farm's model of animality ever more finely in our activities. The purpose of this section is not to exaggerate agribusiness power, even as industrial pigs' substances may coat countless items, including this book's surface. It is instead to point to the instability intrinsic to this model of industrialized animals: it depends on so many practices of consumption to sustain itself, more than can be supplied by human eaters alone. As the model of factory farm growth developed in places such as Dixon appears to be at its most totalizing and far-reaching, it is also at its most fragile.

A brief epilogue gathers together some of these arguments to articulate how American human beings are potent kin with American hogs, as two of the world's most heavily industrialized and overworked living beings, and calls for the very idea of deindustrialization to be critically reclaimed as an active and ongoing collective project.

NOTES

INTRODUCTION: THE "FACTORY" FARM

1 Pork is technically red meat. Many Americans think of it otherwise because of a campaign by the National Pork Board in the 1990s to brand pork as a low-fat muscle—"the other white meat"—at a moment when industrial chicken was rising in popularity. There are also cows raised in the region.

2 See also records of visitors' reactions to the stockyards in the introduction to Lee 2008; in Giedion 1948; Pacyga 2015. For analysis of slaughterhouse tours, see Shukin 2009.

3 Even Upton Sinclair, in his infamous muckraking novel *The Jungle*, believed that parts of industrial systems of organizing human and natural energy could be redeemed for the project of building a new socialist world. For the ethos of American mass-production, whose roots lie partially in the meatpacking systems that inspired Henry Ford's assembly line, see Hounshell 1984.

4 For further analyses of how industrialism creates unruly environs, see Checker 2005; Kirksey 2015; Murphy 2017.

5 All company, personal, and place-names in this book are pseudonyms, intended to provide a measure of anonymity to individuals in the four pork corporations where I conducted research. I am unable to specify with precision the exact locale where most of my fieldwork took place, as the largest pork corporations in the United States are each centrally located out of a single state. Colorado, Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, Oklahoma, Texas, and Utah all contain major corporate pork installations that resemble the operations in this book. I have rounded and changed these numbers slightly, matching them to a series of hog slaughterhouses across the Great Plains and the Midwest such that this could be one of a small handful of places. While this is among the largest single-line slaughterhouses in history, the Chicago Stock Yards, across

many slaughterhouses and species, killed more animals at their peak—as many as ninety million in a year.

6 All of these figures are approximations. The figure on fecal material is based on an estimate of a hog generating eleven pounds of manure per day. The weights of body material are based on the assumption of a 285-pound live weight hog. The percentage of each substance within the hog is derived from a breakdown supplied by Meindertoma (2009).

7 For *worlds* and *worlding*, which she defines as "the practice of creating relations of life in a place and the place itself," see de la Cadena 2015, 291fn4. Worlds, under these terms, are not fixed containers. They are places where things happen and unfold. One primary project of the factory farm, as we shall see across chapters, is to make those new actions and becomings always be the same. It is not unlike how Walter Benjamin (1999, 26) labeled modernity as the time of hell: "pains eternal and always new."

8 "Grueling monotony" is the anthropologist Steve Striffler's (2005) perfect phrase to describe the burdensome repetition of cutting a single piece of an animal with one motion all day. The phrase was inspired by Striffler's experiences working undercover in a Tyson Foods chicken slaughterhouse in Arkansas, when he would come home after work exhausted and unable to fulfill rudimentary household tasks. For a portrait of repetitive assembly work more generally as mental and physical endurance, see Peña 1997.

9 To protect this person's anonymity to the greatest extent possible, I use the pronouns "they" and "them" to prevent local identification by gender.

10 For an explanation of how this access came about, see chapter 4.

11 As time went by and I became friends with some bankers, and met Dover Foods' own land manager, I learned about this fraught history of purchasing territory from absentee owners. In a different context and place, Annie Proulx's novel *That Old Ace in the Hole* (2002) satirically enlivens this process by following the exploits of a man sent from Chicago to Texas to convince farmers to sell land for hogs.

12 Until 2018 in North Carolina, most of these nuisance suits were unsuccessful (see Centner 2004; Chapin et al. 1998; DeLind 1995). The work of Susan Schiffinan and her colleagues (1998) was an inspired scientific effort to "materialize" hog odor, an effort that has also been developed by Steven Wing and his colleagues (2008). Kendall Thu (2010), who sat for two years on the National Agricultural Air Quality Task Force, along with Kelly Donham (1998), has done important work to detail the respiratory and health problems facing workers and neighbors who are exposed to the manure pits of cafo s.

13 For a deep analysis of absent presences, see Stewart 1996. Reading Elayne Oliphant's (2012) dissertation and forthcoming ethnography on the Catholic church's quiet domination of the Parisian cityscape has taught me how to think about and become more attuned to omnipresent invisibilities.

14 In addition, see García (2010) and Lien (2015) for how models of industrialized animality are being taken up in guinea pig–rearing and salmon farming, respectively.

15 For important anthropological and geographical work on early phases of hog restructuring, see Bonanno and Constance 2006; Thu and Durrenberger 1998.

16 Key texts on the industrialization of chicken production, along with its imitation by other "protein" companies, include Boyd 2001; Boyd and Watts 1997; Silbergeld 2016; Striffler 2005.

17 Agricultural contracting is becoming increasingly common, more generally, as part of an economic movement toward "supply chain capitalism" (see Tsing 2009a; Watts 2004). There are few broad histories of the shifts across the twentieth century from small-scale diverse farms with pigs to intensively raised corporate protein production. Dawn Coppin's (2002) doctoral thesis on the minute steps that led to the transformation of the pig alongside broader industrial restructuring is an important exception. Ronald Rich's (2003) doctoral dissertation on Illinois hog contracting provides a robust political economic portrait of the contracting form as it unfolded in the Upper Midwest. Stull and Broadway (2013) provide a comparative survey of the transformation of rural communities facing large integrated meatpackers, with a focus in Kansas. A number of books explore the cultural history of the pig, see esp. Horwitz 1998; Mizelle 2012. For a broad overview of this literature, see Blanchette 2018.

18 Vitality—whether in biological or cultural forms—is typically employed as a word to name that which exceeds dominating human agency and cessation, or that which resists both biological death and cultural deadening (see Bennett 2010). Industrial rationality, technics, and routinization are often taken as the sign of de-vitalized "death" (Jones 2011; Lemke 2011). I put the factory farm's project in the oxymoronic terms of "vital industrialization" to magnify the contradictions and ambitions at the very heart of the endeavor. For parallel thoughts on the exploitation of vitality, see also Beldo 2017. I should add that Dover Foods is no longer unique in this regard of seeking maximal vertical integration, either within the United States or elsewhere. Many companies have made similar investments in the conversion of waste products into internally recycled inputs.

19 For a sampling of the better pieces of popular journalism on factory farms, see Eiznitz 2007; Genoways 2014; Leonard 2014; Pollan 2002; and, esp., Schlosser 2001.

20 To analyze agribusiness in these terms is to think alongside an ongoing feminist effort to examine how large-scale capitalist institutions (or, better, capitalisms in the multiple) are shaped and generated in and through mundane practice (Appel 2012; Bear et al. 2015; Salzinger 2004; Yanagisako 2002). Some recent ethnographies, in parallel, have tried to take the industrial out of the factory proper, illustrating how people consciously wield and aspire to achieve its values and affects—especially in post-Fordist contexts where industrial work is no longer a norm but, for working-class communities, more often than not a (tensely nostalgic) memory (Muehlebach 2011; Walley 2013).

21 See also Besky (2019), and Patel and Moore (2017), for broader analyses of the value of cheapness in global agribusiness.

22 See Blanchette (2018, 2019) on agricultural exemption laws around air pollution. Unionization is difficult to achieve in workplaces regulated as "agricultural"—

and this is reflected in Dover Foods' wages, which are marked by a sudden drop once one exits the unionized slaughterhouse. In parallel, one should also read parts of this book's analytical method as influenced by a motivation to reject agricultural exceptions, politically and intellectually, by primarily drawing from literatures in labor and industrial studies. Taking reflexive industrialization at its word, I analytically act as if they are "really" factories.

23 We will see that this is not my own abstract point: standardization is an ongoing and never-quite-complete process even within Dover Foods' own adopted industrial manufacturing philosophies (chapters 4 and 8). On ways to think about the idea that no being is an island—that pigs cannot be industrialized without attention to their bio-social relations—see Tsing 2012b. For an earlier attempt to think about farm animal industrialization in these extensive terms, using the case of milk production, see DuPuis 2002.

24 I thank Jake Kosek for pushing me on this point. For a general critique of standardization's constant overreach, see Scott 1998. For the limitations of efforts to achieve "scalability," such that (in our case) making one pig is akin to making one million, see Tsing 2012a, 2009b.

25 I use the word "skirmish" because of its overtones of quiet, mundane, everyday conflict. This is not a space, as we shall see, in which there is—at least during the very specific period of my own research—much in the way of robust labor organizing or social movements. See Stuesse (2016), however, for an instructive text on the conditions of possibility in which those movements might arise in meatpacking.

26 In other words, one part of this book is solidly within the long-standing tradition of ethnographies of the industrial labor process in terms of control, hierarchy, and exploitation: see, e.g., Burawoy 1982; Collins 2003; Nash 1979; Ong 1987; Salzinger 2004. But one of my key assumptions is that how we write and analyze industrialism must shift alongside the object of production.

27 For elaboration of this point, see Cochoy 2005. This also provides some insight into Dover Foods' corporate model. The company controls a very large percentage of American swine with little branding and prefers to sell raw commodity pork to wholesalers and other processing companies. While one is unlikely to find a Dover-brand tenderloin in a grocery store, it is likely that every pork eater in North America or East Asia has consumed a piece of these hogs.

28 For analyses of how capitalist value is becoming increasingly affective, tied to desires and modes of sociality rather than simply encased in material commodities, see Hardt and Negri 2000; Virno 2004.

29 In Gastón Gordillo's (2014) dialectical terms, one might say that these pursuits of totality contain within themselves their own "negativity."

30 On the stakes of these kinds of debates, see, e.g., Graeber 2001; Jay 1986; Tsing 2012a. It is usually invoked when discussing allegedly "big things": global capitalism as a whole (Arrighi and Moore 2001), how capitalism incorporates nonhuman worlds (Moore 2015), or abstractions such as "the U.S. food system" (Neff

2015). For an excellent and creative example to think about the politics and use of totality in places we might not expect to find the word and form of thinking to have much relevance—notably, given this book's topic, in small-scale "local" pork production—see Weiss 2016.

31 Things like the barcode also require new approaches to capitalist animality. There are stellar scholarly ethnographies that take place in growing farms (Rich 2003) and slaughterhouses (Pachirat 2011; Ribas 2016; Striffler 2005) in relative isolation. But a shortcoming of this writing is that it centers its relative attention on one node of living or killing. This book instead attempts to inhabit integration as a political process, as it is integration itself—more so than confinement, disassembly speeds, or corporate finance—that has distinguished capitalist meat since the 1980s.

32 For an analysis of what they critically call "damage narratives," or efforts to ascribe exceptional pain and suffering to particular peoples, communities, and places in a (perhaps naïve) effort to ameliorate these conditions, see Murphy 2017; Tuck 2009.

33 In other words, I am not dismissing the very real struggles, actual and potential, unfolding in other diverse agricultures outside of this place (see esp. Alkon and Agyeman 2011; Lyons 2016; McMichael 2012; Paxson 2013; Penniman 2018; Weiss 2016). My nudge is to allow potentially radical alternatives to be unpacked on their own dynamic terms, amid the specific agribusinesses they confront.

34 For a broader take on this book's method as one of immanent critique, see Mazzarella 2013.

CHAPTER ONE: THE DOVER FILES

1 Corporations such as Dover Foods explain this differently. They claim that many barns were constructed in the 1990s for, say, ten thousand animals but only house five thousand as the company manages territories and disease. Thus, the company claims to rarely need to empty some of its lagoons because they were constructed with larger pits than were necessary for the number of defecating animals that are currently housed in some barns. The company is, however, certainly allowing the vast majority of the pits' contents to evaporate (see Blanchette 2019).

CHAPTER TWO: THE HERD

1 The bulk of this conversation occurred in Spanish but shifted to English as technical workplace terms such as "biosecurity" became the subject of discussion. This was the norm on farms, where the primary spoken languages were Spanish or K'iche', mixed with the English farming phrases taught during training. At the time of my research, a complicated racial division of labor extended across the factory farm's various work sites. For example, the people I encountered in