

“THE GREAT NOMAD:” WORK, ENVIRONMENT, AND SPACE IN THE
LUMBER INDUSTRY OF MINNESOTA AND LOUISIANA
FROM THE 1870s TO THE 1930s

by

KEVIN CONOR BROWN, B.A., M.A.

DISSERTATION

Presented to the Faculty of the Marianna Brown Dietrich College
of Humanities and Social Sciences of Carnegie Mellon University in
Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

CARNEGIE MELLON UNIVERSITY

April 2012

© 2012, Kevin Conor Brown

ACKNOWLEDGEMENTS

Though writing is indeed a solitary affair, completing a dissertation is not. Many people and institutions in Pittsburgh and elsewhere have helped make both my six years as a graduate student and the finishing of this project possible and worthwhile. I would like to publicly thank some of them here.

Carnegie Mellon University supported my graduate career with a full scholarship and stipend. Without this funding I never would have entered graduate school. In the history department, my adviser, Joe Trotter, guided this project with a light touch, giving me the confidence to follow research leads in unexpected directions, while asking many tough questions that have immeasurably improved it. John Soluri gave freely of his time, friendship, and creative thinking, shaping this project and my sense of environmental history in important ways. Joel Tarr offered critical input at an early stage of this project and again as it neared completion. Roger Rouse also helped mold this dissertation when I returned to Pittsburgh with a mountain of research and little sense of how to organize it. Other faculty at Carnegie Mellon, especially Wendy Goldman, David Hounshell, Katherine Lynch, and Steve Schlossman, each taught me much about what it means to be a researcher, writer, and a teacher. At Bucknell University, John Enyeart introduced me to labor history and encouraged me to pursue graduate studies.

Many thanks are also due to the institutions and individuals that supported the archival research in this dissertation. Financial backing from the Center for Africanamerican Urban Studies and the Economy (CAUSE) and the Graduate Student Association at Carnegie Mellon, and from the Forest History Society in Durham, N.C.,

enabled critical research trips to Louisiana, Minnesota, Missouri, and North Carolina. Thanks also go to Mike Gibney, who lent his couch in Columbia, Missouri, and Kate Chilton and Nick Patronik, who showed me around Minneapolis and took me in for Sunday football during my five weeks in the Twin Cities. Closer to home, I flooded Hunt Library's Interlibrary Loan Office with requests for many a document and they never let me down in locating them. The history department office staff, particularly Natalie Taylor, Amy Wells, Gail Took, and Jesse Wilson, helped me navigate the University's maze of forms, schedules, due dates, computers, and copy machines.

Outside Carnegie Mellon, I am very fortunate to be surrounded by a group of friends in Pittsburgh from whom I continue to learn much about history, but who just as frequently remind me there are other things in life besides history. Jason Morgan and Fidel Campet each read drafts of chapters, offering valuable support and criticism, and along with the rest of "The Gang," including Alice Bell, Ruth Campet, Carrie Hagan, Bethany Smith, and Amund Tallaksen, hung out late into many nights discussing life, the universe, and everything. Many thanks to all!

Russell Pryor was my first roommate in Pittsburgh, and from him I have learned much about Marxism, classic zombie films, and chicken. Lisa Seibert and Rachel Oppenheimer were never far away from those discussions either. I look forward to all three of their completed dissertations. Thanks to both Dave Struthers and Lee Vinsel for their guidance and friendship, especially during my first days in Pittsburgh. Michelle Mock encouraged me at many moments, especially down the home stretch with the revelatory words, "Just get it done." Ben Houston was my best (and only) racquetball partner in Pittsburgh. Will Brucher provided excellent feedback on an early draft of

Chapter 4. The Baker Hall Bullies' basketball and softball squads, and particularly Kaaz Naqvi, Rob Hutchings, Andrew Ramey, and Pat Zimmerman, provided much needed distractions and exercise throughout grad school. In Qatar, where I wrote Chapter 2 during the fall of 2010, Stephen Russell and John Gasper deserve special mention for keeping a stressful semester interesting and worthwhile. Over the last year and a half, Cassie Miller has learned probably more than she would ever care to know about the lumber industry in Minnesota and Louisiana. I thank her for listening, but much more for the small, everyday distractions from this project she enabled: breakfasts, walks with Finnegan, coffee breaks, and bike rides.

Sincere gratitude goes to Grandpa Joe and the extended Rocky and Brown families. They were always interested to hear what I was up to in Pittsburgh and family gatherings with them offered welcome respites from this work. My parents, June and Paul Brown, in addition to providing the material and emotional support that allowed me to attend college in the first place, have been my constant cheerleaders. They encouraged this endeavor every step of the way, and most recently, they welcomed me back to New Jersey (but left me alone!) as I wrote the final chapters. My brother Glenn watched this study grow mostly from afar, in Thailand, but he has always been close to it, offering me criticism, copy-editing, and Skype chats as needed. He is a skilled writer, and I look forward to having both his pen and companionship back in the U.S.

Finally, my grandmother, Madelyn Brown, passed away while this project was underway. As a teenager it was with her that I recorded my first oral history interview, then learning about the death of my great-uncle, Martin S. Little, in a "friendly-fire" incident over England in March 1944. I very much regret that I no longer have that tape. I

dedicate this dissertation to her memory and to stories, like Martin's, that too often go untold.

ABSTRACT

“‘The Great Nomad:’ Work, Environment, and Space in the Lumber Industry of Minnesota and Louisiana from the 1870s to the 1930s”

Kevin Conor Brown
Carnegie Mellon University

From the 1870s to the 1930s, the lumber industry in the United States behaved as a “great nomad,” in former Forester William B. Greeley’s words, with the center of production moving from the Great Lakes region during the 1880s and 1890s, to the South after 1900. Despite its mobility at regional and local levels, the industry simultaneously structured and controlled these production spaces both long before and long after workers removed and processed the valuable portions of the forest environment. In valuing the forest, establishing logging camps and sawmill towns, and selling cutover farms, firms created sets of working and living environments and regional landscapes that shaped northern Minnesota and Louisiana from the 1870s through the 1930s, and beyond. Historians who have only followed the “frontier” of lumber production have missed the tension between the industry’s mobility and its long-term influence over the spaces of production. By stretching the spatial and temporal frame I show how the lumber industry sought to control workers and nature (not without difficulty) in several phases of its development and in different ways and at different scales in Minnesota and Louisiana.

Timber cruising represented the initial structuring of the forest spaces by lumber firms, as they sought to ascertain the number of board feet of timber on their land. The “radical simplification” of forests inherent in timber estimating proved challenging for firms, and the professionalization of this task by forestry school trained foresters offered a way toward more authoritative valuations of the forest. Next, loggers and millworkers

faced the forest not as figures of board feet and prices per acre, but through workplaces and homes defined by the needs of lumber firms. These spaces were also defined by Jim Crow (in Louisiana) and challenged by workers' brief union movements. Finally, the post lumber regime owed its landscape to the lumber industry but the social purpose to which this deindustrialized space was put – smallholder agriculture – was also outlined by the industry through its extensive landownership and by its agricultural boosterism. Their vision of the cutover foundered on its assumptions about nature and society.

A NOTE ON PERMISSIONS

Several images in the dissertation have been deleted because the author could not obtain permission to reprint for reproduction on microfilm. Brief descriptions of these items and their sources have been substituted in their place.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
ABSTRACT	vi
A NOTE ON PERMISSIONS	viii
LIST OF TABLES AND FIGURES	x
INTRODUCTION	1
CHAPTERS	
1. “The Great Nomad”: Political Economy and Geography of the U.S. Lumber Industry, 1870s to the 1930s	31
2. The Labor and Nature of Valuing the Forest: Timber Cruisers, the Lumber Industry, and Forestry, 1880-1925	78
3. Working Environments in Logging: Minnesota, 1870-1920s	120
4. Living and Working Environments in Louisiana Mill Towns, 1900-1920	158
5. Deindustrialization, Lumber, and the Cutover: Minnesota and Louisiana, 1900-1940	208
EPILOGUE	266
BIBLIOGRAPHY	278

LIST OF TABLES AND FIGURES

TABLES

2.1 – Comparison of Potter Estimates, 1901 and 1913	97
5.3 – Population of Selected Northern Minnesota Counties, 1900-1930	226
5.4 – Foreign-Born Population, Beltrami County, Minnesota, 1890-1940	226
5.6 – Improved and Unimproved Farm Land, Selected Northern Minnesota Counties, 1900-1930	230
5.8 – Improved and Unimproved Farm Land, Selected Louisiana Parishes, 1900-1930	254
5.9 – Population of Selected Louisiana Parishes, 1900-1940	256
5.10 – Farms and Farm Families, Selected Louisiana Parishes, 1890-1940	256

FIGURES

1.1 – Lumber Production: Selected Regions and U.S. Total, 1869-1939	32
1.2 – Yellow Pine Production: Louisiana and Southern States, 1869-1939	34
1.3 – Lumber Production and Percentage Pine Production: Minnesota and Louisiana Selected Years, 1869-1939	34
1.4 – Map of Minnesota Showing Descriptions of Forests, with Special Reference to the Lumber Industry, 1881	35
1.5 – White Pine Production: Minnesota and Lake States, 1869-1939	36
1.6 – Map of Louisiana, Showing the Distribution of Pine Forests, with Special Reference to the Lumber Industry, 1881	37
5.1 – Map of Minnesota with Cutover Region Emphasized	219
5.2 – “Pyramid of Prosperity,” <i>Princeton Union</i> , 1901	222
5.5 – Photograph of Minnesota Cutover Land, 1914	229
5.7 – Tax Delinquent, Non-Taxable, and Taxpaying Lands in Beltrami County, 1930	236

INTRODUCTION

At the outset of her 1931 exposé of the American lumber industry, *Labor and Lumber*, Charlotte Todes remarked that lumber was “one of the basic materials of industrial society.” “Millions,” she continued, “live in wooden houses, sleep in wooden beds, eat at wooden tables, write with wooden pencils, use wooden matches and toothpicks, read books and newspapers made from pulpwood, are intimidated by policemen with wooden clubs and are finally buried in wooden coffins.”¹ For Todes, a Communist who later served a short prison sentence for refusing to testify in front of a congressional committee, an understanding of these mundane wood products rested in an acknowledgement of the toil of the approximately 500,000 workers then employed in the industry.² Exploited labor, Todes’ study reminded readers, allowed wood products to exist almost invisibly in the background of American life. As she made a passionate call to arms for a new, racially integrated, radical union movement among lumber workers, Todes also commented on a defining characteristic of the lumber industry during the nineteenth and twentieth century: the continuous movement of production. In the Great Lakes states and the South, she noted, “One by one, lumber operations have come to the end of their raw material and have disappeared, leaving a trail of desolate and deserted sawmills and only the stumps and burnt over timber to remind one of the profits extorted from the labor of thousands.”³ As regards these “stumps and burnt over timber,” Todes

¹ Charlotte Todes, *Labor and Lumber* (New York: International Publishers, 1931), 22.

² Louis Francis Budenz, *The Techniques of Communism* (Chicago: Regnery, 1954), 169. On Todes’ husband’s harassment during the McCarthy period, see David H. Price, *Threatening Anthropology: McCarthyism and the FBI’s Surveillance of Activist Anthropologists* (Durham: Duke University Press, 2004), 136-153.

³ Todes, *Labor and Lumber*, 18.

concluded, “there is acknowledgement [by lumber firms] of the need for reforestation, but so far there has been little more than discussion.”⁴

The brief historical brushstrokes offered in Todes’ study accurately identified the central spatial and social dynamics of the industry, and while much separates this dissertation from the approach and goals of her scathing polemic, what makes Todes’ work an excellent starting point is her sense that – somehow – the “the labor of thousands,” “the desolate and deserted sawmills,” and the “stumps and burnt over timber” were connected. Extensive clear cuts in the Great Lakes region after the Civil War occurred under the influence of increasingly integrated domestic markets and a new demand from treeless and lumber hungry Midwest farms, making the industry boom. Minnesota, in particular, reached its peak production in 1900 and afterwards declined rapidly. Though hardwood lumber was important in the southern portion of Minnesota, lumber capitalists sought their real prize in the vast “North Woods,” composed of mainly coniferous trees, and especially Eastern White Pine (*pinus strobus*). Cutting in Minnesota was so rapid that in the years between 1880 and 1915, some *seventy-five percent* of all standing timber in the state was removed.⁵ Facing declining prospects in the Great Lakes region, lumber firms looked elsewhere for “virgin timber.” Often under the direction of the same owners and managers as the industry in the Great Lakes (and even sometimes with the same mill equipment), the American South along with the Pacific Northwest became the key growth regions for lumber production during the first three decades of the twentieth century. In western and northern Louisiana, in particular, the lumber industry depleted forests as rapidly as in Minnesota, leaving vast swaths of cutover pinelands

⁴ Todes, *Labor and Lumber*, 18.

⁵ Committee on Land Utilization, *Land Utilization in Minnesota: A State Program for the Cutover Lands* (Minneapolis: University of Minnesota Press, 1934), 117.

across the state.

In sum, the industry behaved, in U.S. Forest Service Chief William B. Greeley's words, as a "great nomad" rushing across the continent. Undergirding this continual movement in production lay critical structures defining industry ownership and cooperation, lumber markets, and their interaction with federal land and forestry policy between 1870 and 1940. Though federal land policy favored the rapid dispersal of the public domain throughout the nineteenth century, lumber firms took advantage of a policy primarily designed for the disposal of agricultural lands and gained control over forest environments with little agricultural potential. At the same time, the development of corporately organized firms and their trade associations after 1880 concentrated power over those lands, giving lumber firms hegemony over federal forestry policy. Early twentieth century forest policy subsidized fire protection and established National Forests, but declined to regulate logging or reforestation practices. Concomitant revolutions in the production process, meanwhile, increased the ability of firms to cut, transport, and mill large quantities of lumber far from streams and rivers. The industry's capacity to produce massive quantities of lumber made overproduction and low prices a frequent problem, especially as high fixed costs forced firms to liquidate their stands of trees rapidly.

This project traces the impact of local and regional environments and workers in two locales on this political economic structure and follows the consequences of those interactions; in part resulting in the exploited workers, deserted sawmills, and cutover lands described by Todes in 1931. Stated most boldly, this dissertation argues that lumber firms in Minnesota and Louisiana articulated power and accumulated wealth through

their ability to direct and manipulate spaces of production and the forest environment itself. Through a series of chapters focused on specific moments in this history – the measuring and valuing of forests, the “working environments” faced by loggers and millworkers, and the experience of farmers on the “cutover” – this work demonstrates that at each stage the effort to produce lumber and to accumulate capital was incomplete and fraught with challenges from workers and nature. The industry’s “nomadism” both engendered these troubles but also offered partial solutions, as the (seeming) necessity of quickly moving production resulted in new struggles in new spaces while leaving behind the artifacts – abandoned mills and cutover lands – described by Todes.

Ultimately, it is through an examination of the tensions between and within hierarchies of human labor, environmental conditions, and larger political and economic arrangements of Progressive Era capitalism that the course of the American lumber industry from the late nineteenth to the mid-twentieth centuries can be best explained. Put another way, in Minnesota and Louisiana between 1870 and 1940, the lumber industry rapidly grew, matured, declined and abandoned these regional bases of production as the result of a series of unfolding opportunities and pressures placed on it through the interaction of workers, managers, foresters, the forest environments, and markets. Beyond this specific narrative, moreover, this project is an exploration into the history of capital mobility, social power, work, and environmental change.

Throughout modern geological history – since at least the end of the most recent ice age – the regions now called Minnesota and Louisiana have been connected by the course of the Mississippi River. For the American lumber industry, however, the Mississippi River played a very minor role in this inter-regional linkage. Instead, these

places were joined by the unfolding history and logic of capital, defined most simply as the impulse for accumulation inherent in capitalist production and the decisions emanating from this overarching need. The logic of capital, however, is different from the history of capitalism. As this dissertation shows, the history of the lumber industry cannot be explained only with reference to this concept. Contingency, not simply an abstract “logic of capital,” thus determined what the industry looked like in Minnesota and Louisiana. Paying attention to the capital migration to the South from the Great Lakes, then, offers not only a second case study, but also a lens into the inter-regional dynamics of capitalist development. This approach is thus “connective,” in that the lumber industry that emerged in Louisiana was part of a shifting geography of capital where the profits, institutions, knowledge, and even some workers moved relatively quickly from the “spent” forests of the north, and were put to new use in the South and Pacific Northwest. The comparative and connective dimensions of this study make it “transregional” in character.⁶

As a result of this social, economic, and ecological connection, the comparative case study deployed in this dissertation allows for an examination of similarities and differences in the lumbering process as it unfolded in Minnesota and Louisiana – especially in the racial makeup of the workforce, environmental conditions, and the historical timing of growth and decline. This comparative and connective approach reveals both the homogenizing aspects of capitalist development, but also the flexibility

⁶ The development of transnational history has pointed to the deficiencies in nationally bound studies. Environmental history is especially well placed to take advantage of the move to transnational histories, as political borders do not contain many environmental ideas, changes, or problems. Though this project stays focused on the U.S., it is clear that “globalization” also requires new intra-national connections. My work is inspired by developments in transnational history and makes “transregional” connections that are also underdeveloped in national histories.

of this system to adapt to (and embrace) different institutional, environmental, and social contexts. Difficult and dangerous work, environmental degradation of the forest environment, and market competition were omnipresent in both states. At the same time, the existence of the Jim Crow regime in the South (and its absence in Minnesota), and the impact of climatic differences on the methods that the industry could use to move logs from the forests to the mills suggests the capacity of the industry – and of capitalism, generally – to adapt itself to different social and environmental arrangements. In other words, though the industry necessarily proselytized capitalist class and market relations in the production and marketing of lumber, it simultaneously relied on and incorporated particular regional cultural and political histories and environmental conditions into its *modus operandi*.

In writing this dissertation, I both build on and challenge a number of approaches to the history of the lumber industry, as well as histories of the environment and labor. In particular, this dissertation “stretches” and links concepts and themes embedded in several historiographies. I address this project’s contributions in two sections. First, I explain how my approach stretches conceptualizations of *time and space* for studies of the lumber industry, and in environmental history more generally. Specifically, by focusing on several stages of the lumber industry’s presence in Minnesota and Louisiana, I am able to incorporate an analysis of both deindustrialization and capital mobility. Second, this project reorients the relationships between *class, environment, and power*. I follow what historian Leon Fink calls the “political economy impulse” in labor history to demonstrate how class power in the lumber industry was articulated, in part, through the

control of the environment.⁷ Specifically, I incorporate and build on understandings of “working environments” and “capitalist simplifications” in the forest. The remainder of this introduction explores these contributions, before turning to a brief discussion of sources and chapter divisions.

I. Stretching time and space

I approach the U.S. lumber industry holistically, examining the measurement and valuation of the forest, the industrial processes in the extraction and milling of lumber, and concluding with the tensions over the re-purposing and revaluation of “cut-over” lands the industry left behind in both Minnesota and Louisiana. This effort to consider three phases related to the industry is a departure from the approaches of many environmental histories, which have worked best at capturing the processes and contradictions in one phase of an industry’s presence in a region or nation. Most often these “industrial environmental histories,” as I call them, trace the development and tensions in the production process of a given commodity, but frequently conclude after production stops and capital migrates away. In other words, they fail to describe the decline of an industry. By remaining focused on what industry “leaves behind,” we can better comprehend the long-term effects of industrial development, and also better assess (often as problematic) efforts to rebuild economies and ecologies on new footings.

William Cronon’s magnum opus, *Nature’s Metropolis: Chicago and the Great West* (1991), a foundational book in the field of environmental history, illustrates this problem. In *Nature’s Metropolis*, Cronon laid out how in Chicago’s mid-nineteenth

⁷ Leon Fink, “The Great Escape: How a Field Survived Hard Times,” *LABOR: Studies in Working Class History of the Americas* 8, no. 1 (2011): 113.

century commodity markets one could see the reordering of human relationships to nature, space, and wealth. In making “the West,” said Cronon, “first nature” (the physical environment) and “second nature” (the human interpretation and manipulation of these environmental conditions) came together in ways that obscured the very artificiality of the institutional and environmental arrangements responsible for Chicago’s growth, making it appear “natural.” The lumber industry, in particular, illustrated this history well and received significant attention in the study. Beginning in the 1850s, lumber from Wisconsin and Michigan was cut and shipped across Lake Michigan to the lumberyards of Chicago where wholesale dealers then sold it to retail merchants serving the new plains towns stretching across the Midwest. This connection “made Chicago, a city located in one of the nation’s most treeless landscapes, the greatest lumber center in the world.”⁸ By 1890, though, a number of changes had contributed to the decline of Chicago as a crucial lumber market, including the structure of lumber wholesaling and changes in railroad freight rates. The very process of production, however, also contributed; clear-cutting in Wisconsin and Michigan left Chicago’s market without a forest hinterland on which to draw. The development of the lumber industries in Minnesota and Louisiana, in fact, represented challenges to the hegemony of Chicago as the major Midwest center for lumber, and as Minnesota and Louisiana’s production expanded they largely supplanted Chicago’s role by using alternative distribution networks, based on rail or water shipments to other wholesale centers or directly to retailers. This dissertation can thus be seen as an extension of the history explored in *Nature’s Metropolis*, in that it demonstrates the continually shifting loci of production and distribution in the American lumber industry.

⁸ William Cronon, *Nature’s Metropolis: Chicago and the Great West* (New York: Norton, 1991), 183.

A more substantial conceptual difference between *Nature's Metropolis* and this dissertation lies in differing approaches to the decline of the industry. Cronon argued that the lumber industry “left behind a literal wasteland” in the Great Lakes region, explaining that logging crews left slash (piles of debris) and stumps riddling the newly cutover land.⁹ Lumber firms and boosters imagined this “wasteland” would be replaced by widespread agricultural settlement, but as Cronon pointed out, “The dream that the ‘Cutover’ district would become a fertile agricultural landscape proved within two or three decades to be an illusion.”¹⁰ Despite Cronon’s accurate account of the difficulties – the “illusion” – of cutover agricultural development, from the perspective of participants this eventuality was certainly not clear, and it begs further analysis of the geography of nature or the geography of capital in the cutover. I argue it became a site where lumber and land firms, regional boosters, and poor farmers reconstructed a *new* set of environmental and social relationships on top of the landscape produced by the lumber industry. If, as Cronon hoped, *Nature's Metropolis* made “parables for our own lives” by writing, in part, about the transformations that took place in the mid-nineteenth century as nature and capital met in and around Chicago, it is a lesson that tells us little what happens in those spaces after capital left.¹¹ In other words, we know much about the impact of industrial expansion on places – in part thanks to the work of Cronon and other environmental historians – but we need to look “beyond the ruins” of abandoned mills and fallow land, to borrow a phrase from historians Jefferson Cowie and Joseph Heathcott, and learn more

⁹ Cronon, *Nature's Metropolis*, 202.

¹⁰ *Ibid.*, 203.

¹¹ *Ibid.*, xvii.

about what happens after industries decline and migrate.¹² How do environmental problems associated with regional disinvestment get “solved” and for whom? Who bears the costs of “recovery?” And perhaps most crucially, is regeneration or recovery even possible?

Cronon’s study, now twenty years old, is not alone in missing answers to these questions. Other studies of the lumber industry frequently also focus on the industrial phase of firms’ operations. The most recent national synthesis of the lumber industry is senior scholar Thomas R. Cox’s *The Lumberman’s Frontier: Three Centuries of Land Use, Society, and Change in America’s Forests* (2010). Though Cox’s study is valuable especially because he synthesizes the literature to illustrate the continuous regional movement of production – “the lumberman’s frontier” – he makes only passing references to the cutover and does not demonstrate how lumber companies sought to encourage cutover agricultural development, a story that illustrates the power of firms in these regions after the “frontier” moved on.¹³ Other recent industrial environmental histories by Brian Black, David Igler, and Myrna Santiago, for example, each say little about the “aftermath” of the enterprises they study.¹⁴ By focusing exclusively on the industrial phase of an industry’s operation in a specific place, these historians implicitly

¹² Jefferson Cowie and Joseph Heathcott, *Beyond the Ruins: The Meanings of Deindustrialization* (Ithaca: Cornell University Press, 2003), 1.

¹³ Thomas R. Cox, *The Lumberman’s Frontier: Three Centuries of Land Use, Society, and Change in America’s Forests* (Corvallis: Oregon State University Press, 2010). William G. Robbins’ classic *Lumberjacks and Legislators: Political Economy of the U.S. Lumber Industry, 1890-1941* (College Station: Texas A&M Press, 1982), also does not devote much attention to cutover development.

¹⁴ See Brian Black, *Petrolia: Landscape of America’s First Oil Boom* (Baltimore: Johns Hopkins University Press, 2000); David Igler, *Industrial Cowboys: Miller & Lux and the Transformation of the Far West, 1850-1920* (Berkeley: University of California Press, 2001); and Myrna Santiago, *The Ecology of Oil: Environment, Labor, and the Mexican Revolution, 1900-1938* (Cambridge: Cambridge University Press, 2006). Each of these studies, in either the introduction or conclusion, hint at some of the changes that have taken place in the wake of the industry or firm they explore. In the case of Black and Santiago, they begin with meditations on the current landscapes of northwestern Pennsylvania and Huasteca region of Mexico, respectively. They offer little, however, on connecting the images of the present with their historical subject. In other words, we are still left wondering what “replaced” the industry in these regions.

accept the notion that environmental and social change (and degradation) ceased after the oil or cattle grazing industries wilted. This, in turn, may provide a basis for an undue declensionism in environmental history. While not denying the overall and continuing deleterious effects of industrial development – something quite obvious when studying the cutover – it is important to ask what communities built in the wake of extractive-industrial operations.

In part because one of the roots of modern environmental history is in “forest history,” however, questions related to the rehabilitation or “recovery” of forests do have a long and important historiography, mostly framed by a focus on the birth of the forestry, conservation, and environmental movements and institutions.¹⁵ Harold K. Steen’s *The U.S. Forest Service: A History* (1976) is perhaps the best expression of this literature. He captures the effects of national political developments on the Forest Service and developments within the agency that guided its approach to forest conservation.¹⁶ Two of the most recent treatments of the cutover region of the Great Lakes, moreover, provide important perspectives on the post-lumber era. Robert Gough’s *Farming the Cutover: A Social History of Northern Wisconsin, 1900-1940* (1997), captured much about the experience of cutover migrants in their attempt to work the land and create new agricultural communities. A second study, James Kates’ *Planning a Wilderness:*

¹⁵ See Thomas R. Cox, “A Tale of Two Journals: Fifty Years of *Environmental History* – and its Predecessors,” *Environmental History* 13, no. 1 (2008): 9-40. On the approach of historians to the U.S. Forest Service, see William G. Robbins, “The United States Forest Service and the Problem of History,” *The Public Historian* 15, no. 3 (1993): 41-48.

¹⁶ Harold K. Steen, *The U.S. Forest Service: A History* (Seattle: University of Washington Press, 1976). The literature on conservation and forestry is massive, but especially helpful are recent more critical histories of forestry and the Forest Service include Samuel P. Hays, *Wars in the Woods: The Rise of Ecological Forestry* (Pittsburgh: University of Pittsburgh Press, 2007), and *The American People and the National Forests: The First Century of the U.S. Forest Service* (Pittsburgh: University of Pittsburgh Press, 2009). On conservation, the Progressive Era, and the Great Depression, see Neil Maher, *Nature’s New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement* (New York: Oxford University Press, 2008).

Regenerating the Great Lakes Cutover Region (2001), delved into the writings of conservationists and foresters who during the 1920s began to publish articles on the cutover, propagandizing a new view of the region that suggested it should be intentionally reforested, at the expense of any further agricultural development.¹⁷ Both of these studies, however, suffer from the opposite problem of industrial environmental histories: the lumber industry does not play a prominent role in their analyses and these histories do not connect well with the themes of environmental change at the hands of industry present in the former works.

Michael Williams' masterwork, *Americans and Their Forests: A Historical Geography* (1989), does link industrial and conservation history in exploring the gradual diminution of American forests from pre-European settlement through the twentieth century at the hands of agriculture and industry, and their "rebirth" in recent decades. This dissertation builds on Williams' encyclopedic study by giving texture to the regional transformations he outlines, especially with a focus on how these transformations occurred at the point of production.¹⁸ The goal should be to link these narratives into a story of continuous, if uneven, environmental and social transformations, first under control of the industry, and then through a mix of the industry, rural boosters, foresters, and poor farmers. This is not a call for continuing narratives indefinitely – or for *The Mediterranean* length monographs – but rather for capturing the enduring power and actions of lumber firms over regional development, space, nature, and workers before,

¹⁷ Robert Gough, *Farming the Cutover: A Social History of Northern Wisconsin* (Lawrence: University of Kansas Press, 1997); and James Kates, *Planning a Wilderness: Regenerating the Great Lakes Cutover Region* (Minneapolis: University of Minnesota Press, 2001). Additionally, very few of the sources in these studies deal specifically with Minnesota.

¹⁸ Michael Williams, *Americans and their Forests: A Historical Geography* (Cambridge: Cambridge University Press, 1989).

and especially after, its formal industrial presence. The influence of the industry lingered long after sawmills closed.

By remaining focused on the “cutover” lands I have also found myself writing about a kind of deindustrialization. Though a term typically applied to the process of industrial decline in the Northeast and Midwest after 1970, and brought into popular usage in Barry Bluestone and Bennett Harrison’s classic study, *The Deindustrialization of America: Plant Closings, Community Abandonment, and the Dismantling of Basic Industry* (1982), the collapse of the lumber industry in Minnesota and Louisiana resulted from much the same process. Bluestone and Harrison defined “deindustrialization,” as the “widespread, systematic disinvestment in the nation’s basic productive capacity,” a fitting descriptor of what happened in Minnesota and later in Louisiana, even if it lacks the inclusion of the rapid consumption of nature as an underlying cause.¹⁹ Still, in the forests of Minnesota during the early 1900s, as in the factories of Pittsburgh, Detroit, and Buffalo during the 1970s, firms chose to relocate and consolidate instead of reinvesting in these older sites of production (in the former case through reforestation, and in the latter through the modernization of physical plant). If it seems strange to think about the early twentieth century lumber industry as part of a process of deindustrialization, instead of as an extractive boom-bust cycle on an industrial periphery, that may say more about our misplaced understandings of urban manufacturing as “permanent,” than about a unique trajectory in extractive industries (especially those, like lumber, that are renewable). An examination of lumber can change how and where we think about deindustrialization and also suggests that the environment should form a more important place in the narratives

¹⁹ Barry Bluestone and Bennett Harrison, *The Deindustrialization of America: Plant Closings, Community Abandonment, and the Dismantling of Basic Industry* (New York: Basic Books, 1982), 6.

of declining manufacturing in the 1970s and beyond.

As I make an argument for conceptualizing the presence of the lumber industry in one region over a longer time period than is typically done, in writing a comparative study I also stretch the dissertation's frame to capture the flight of capital to new regional sites of production. Thus, the flipside of focusing on each region longer is the effort to incorporate a perspective on capital mobility, generally, and lumber's regional shift to the South, specifically. In the 1970s and 1980s, geographers began to re-conceptualize the role of space in social theory and practice, which had dropped out of social theory and history through the twentieth century, showing "how relations of power and discipline are inscribed into apparently innocent spatiality of social life."²⁰ Not only do social struggles and power play out over space, but as scholars like Neil Smith have argued, capitalism itself is also governed by a spatial logic where "capital is like a plague of locusts. It settles on one place, devours it, then moves on to plague another place. Better, in the process of restoring itself after one plague the region makes itself ripe for another."²¹ Through a process of "differentiation" and "equalization," capital moves in a "see-saw" fashion across geographical space. This dissertation turns on the regional shift in the geography of capital in the lumber industry – the movement from Great Lakes to the South – while staying focused on the cutover regions of the "devoured" places. Finally, specific chapters (3 and 4) each deal with struggles over space and environment at the point of production and in the mill towns and lumber camps (considered in the next

²⁰ Edward Soja, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory* (London: Verso, 1989), 6.

²¹ Neil Smith, *Uneven Development: Nature, Capital, and the Production of Space*, 3rd ed. (Athens, Ga.: University of Georgia Press, 2008), 202.

section).²²

Though geographers have since the 1970s reasserted the importance of space in social theory, the specific dynamics of regional capital mobility and power in the Southern lumber industry were identified and characterized sixty years ago by historian C. Vann Woodward in his classic, *The Origins of the New South, 1877-1913* (1951). In that book, Woodward described the South in the wake of Reconstruction as having a colonial relationship to the North. Woodward showed that northern capital owned and operated many “New South” industries – with lumber, mining, and textiles serving as the best examples – keeping the region politically and economically dependent. Though historians have challenged parts of his thesis, my research has little to refute Woodward’s general claim.²³ In fact, many of the business collections I used to document the southern lumber industry are held in northern archives, precisely because the mills in Louisiana were controlled from places like St. Paul, Minnesota and Kansas City, Missouri. Despite Woodward’s powerful statement on lumber as a crucial industry in the “New South,” the industry (in Louisiana or elsewhere) has received little attention from historians, as they have more often associated the industry’s growth during the twentieth century with the Pacific Northwest (and its radical I.W.W. lumberjacks) than with the South.²⁴

²² See also Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (1974; repr., Oxford: Blackwell, 1991); David Harvey, *The Limits to Capital* (1982; repr., New York: Verso, 2006), and “The Spatial Fix – Hegel, von Thunen, and Marx,” *Antipode* 13, no. 3 (1981): 1-12; and John Holloway, “Capital Moves,” *Capital & Class* 57 (Autumn 1995): 136-144.

²³ C. Vann Woodward, *The Origins of the New South, 1877-1913* (Baton Rouge: Louisiana State University Press, 1951). On the legacy of *Origins* on Southern history, see John B. Boles and Bethany L. Johnson, eds., *Origins of the New South Fifty Years Later: The Continuing Influence of a Historical Classic* (Baton Rouge: Louisiana State University Press, 2003). Though Woodward described the lumber industry as critical for the new south, he only spent about five pages describing it.

²⁴ James E. Fickle, “Forest Products: The South’s ‘Forgotten Industry,’” *Journal of Mississippi History* 66, no. 1 (2004): 1-16. An exception to the general lack of scholarship on the southern industry, is the 1911-1914 “Louisiana Timber War,” which has produced a good bit of scholarship (it is addressed in chapter 4 of this dissertation). See especially James R. Green, “The Brotherhood of Timber Workers 1910-1913: A Radical Response to Industrial Capitalism in the Southern U.S.A.,” *Past and Present* 60 (1973): 161-200.

The focus on both deindustrialization and regional capital mobility in this dissertation also offers an implicit challenge to the community study model for understanding the lumber industry.²⁵ Though much can be learned from a focus on one or a few communities in a given region, especially regarding how firms' structured and exerted control over their workforces and the ability of workers to resist, it is only by holding this view in tension with the larger regional shifts in production that these local struggles are comprehensible. One of the most recent efforts to capture the lives of workers in the lumber industry has been William Jones' *The Tribe of Black Ulysses: African American Lumber Workers in the Jim Crow South* (2005). In that study, Jones demonstrated the patent falsehood at the heart of the "black Ulysses" myth propagated by sociologists Howard Odum and E. Franklin Frazier in the 1920s and 1930s. Their thesis posited that black southern men were incompatible and alienated by modernity and industrialization, forcing them, in Jones' words, to "sever their ties to families and communities and to wander the South as outcasts."²⁶ Instead, Jones showed that African-American lumber workers maintained strong family ties as they became incorporated into the southern industrial economy. First as semi-proletarians participating in lumber work to supplement farm incomes, and then as full-time workers in sawmill towns, these African American men negotiated the Jim Crow environment to achieve better lives for

²⁵ Lumber industry community-regional studies include, Jeremy W. Kilar, *Michigan's Lumbertowns: Lumbermen and Laborers in Saginaw, Bay City, and Muskegon, 1870-1905* (Detroit: Wayne State University Press, 1990); and Steven Andrew Reich, "The Making of a Southern Sawmill World: Race, Class, and Rural Transformation in the Piney Woods of East Texas, 1830-1930" (Ph.D. diss., Northwestern University, 1998).

²⁶ William P. Jones, *The Tribe of Black Ulysses: African American Lumber Workers in the Jim Crow South* (Urbana: University of Illinois Press, 2005), 2. Jones' study uses three southern lumber towns as case studies, but chooses towns that were exceptional in their longevity and described them long after the peak in southern lumber production occurred. In Louisiana, for example, he uses Bogalusa, home of the Great Southern Lumber Company. Unlike the vast majority of southern lumber companies it did begin reforestation land in the 1920s and later shifted to paper production instead of shutting down.

their families and communities, ultimately embracing a normative “breadwinner ideology.” Though a well-argued corrective to the historiography of African American proletarianization in the South, Jones’ emphasis on the efforts – and indeed ability – of these workers to forge stable community lives at the hands of the industry missed how most towns across the South where these men labored operated with impermanence in mind.²⁷ The industry, through its strategy of “cut and run” did not create the spatial structures for “permanent” towns or stable communities, especially before 1940. As in Minnesota, the southern lumber industry collapsed. Alongside community studies of lumber towns, then, we need analyses that demonstrate how these communities were limited by the spatial and temporal cadence of the industry, and of efforts to build a cutover/post-lumber economy and ecology.

Collectively, then, in challenging the industrial environmental history model, and connecting it with forest history and a narrative of capital mobility, the comparative and connective, or “transregional,” case study format of this dissertation allows for fuller understanding of the long shadow cast by one industry on two regions – a shadow that persisted after logging and milling declined. In other words, activities and processes that should be considered part of the history of the lumber industry need to be broadened from explicit extraction, to the measuring and valuing of land before the first saw ever cut a tree and the efforts of the lumber firms to dispose of the cutover and the creation of new environmental and social relations in this “degraded” space. Finally, an analysis of the regional shifts in lumber production helps explain the context in which local struggles

²⁷ On African-American proletarianization, see Joe W. Trotter, Jr., *Black Milwaukee: The Making of an Industrial Proletariat, 1915-45* (Urbana: University of Illinois Press, 1985), and *Coal Class, and Color: Blacks in Southern West Virginia, 1915-32* (Urbana: University of Illinois Press, 1990); Kimberley L. Phillips, *AlabamaNorth: African-American Migrants, Community, and Working Class Activism in Cleveland, 1915-45* (Urbana: University of Illinois Press, 1999).

over “working environments” and class power took place. It is to that topic that I now turn.

II. Stretching class, environment, and power

Armed with E.P. Thompson’s famous injunction that class is not merely a thing, but “something which in fact happens” through sets of relationships and common experiences, and optimistic about the possibility of progressive (or radical) social change as a result of the advances of the civil rights and labor reform movements, U.S. labor historians during the 1960s and 1970s went a long way in documenting the role of the working class in making history and “resisting” capital – in workplaces, culture, consumption, and politics.²⁸ Ironically, the recovery of workers’ power and autonomy in their narratives often diminished the very real power of capitalists (and the capitalist system). Driven by a desire to push back against histories that gave working people no “agency” or power, these “new labor histories” could make it hard to see where the capitalists were. In focusing squarely on communities of workers, *class* – as a process of subordination and taking – was sometimes written out, and along with it capitalist *power*.

Perhaps as a result of the stunning (if not always surprising) losses for the labor movement and left-liberal working class politics during the 1980s and 1990s, this tradition is being turned back. David Montgomery – a central figure in the creation of the new labor history and the “workers’ control” paradigm – actually helped to demonstrate the power of owners and the state to limit workers’ challenges in his 1993 study, *Citizen Worker: The Experience of Workers in the United States with Democracy and the Free Market during the Nineteenth Century*. Several years later, Jefferson Cowie’s study,

²⁸ E.P. Thompson, *The Making of the English Working Class* (New York: Pantheon, 1963), 9.

Capital Moves: RCA's Seventy-Year Quest for Cheap Labor (1999), showed how during the twentieth century electronics workers in the U.S. and Mexico were constantly and creatively constrained by the power of transnational capital, even as workers sought to push back (or make peace with) those forces.²⁹ These studies did not represent a return to the *ancien regime* of excluding workers' power from historical analysis, but rather emphasized the ways that their lives were constrained by powerful political, economic, and cultural forces. Thus, in this insurgent tradition of the "political economy impulse" in labor history, I show not only how workers (individually and collectively) fought back against lumber firms, but just as importantly the limitations of that activism and the forces that contained and constrained their lives.³⁰ Specifically, I explore these contests over social and spatial power in two ways: (A) through a focus on working and living environments in the mills and woods, and (B) in the process of commodifying the forest environment.

Marx explained in "The German Ideology" (1845-6) that a historical-materialist theoretical framework required an understanding of "the physical organization of these individuals [humans] and their consequent relation to the rest of nature," and he prescribed that "the writing of history must always set out from these natural bases and their modification in the course of history through the action of men."³¹ Despite this weighty advice, labor historians have given little attention to this "metabolism" of nature

²⁹ David Montgomery, *Citizen Worker: The Experience of Workers in the United States with Democracy and the Free Market during the Nineteenth Century* (Cambridge: Cambridge University Press, 1993); and Jefferson R. Cowie, *Capital Moves: RCA's Seventy-Year Quest for Cheap Labor* (1999; repr., New York: New Press, 2001).

³⁰ Fink, "The Great Escape: How a Field Survived Hard Times": 113. In this recent tradition, see also Bethany Moreton, *To Serve God and Wal-Mart: The Making of Christian Free Enterprise* (Cambridge: Harvard University Press, 2009).

³¹ Karl Marx, "The German Ideology," in *The Marx-Engels Reader*, ed. Richard Tucker, 2nd ed. (New York: W.W. Norton, 1978), 149-150.

and society. Environmental historians have thus pointed to the absence of “nature” or “environment” in labor histories and suggested that their analyses of class struggles and capital accumulation remained incomplete without an understanding of the ways that the non-human world defined, in part, these class relationships over time. This lacuna in labor history is perhaps even more surprising given the theoretical scholarship emerging from the Marxist tradition that has gathered the fragments of Marx’s writings on nature and transformed them (not always smoothly) into an “ecological Marxist” framework.³² Even in *LABOR: Studies in Working-Class History of the Americas*’ spring 2011 issue, editor Leon Fink’s review of recent scholarship in the field “under hard times” did not include efforts to integrate histories of class and power with histories of environmental change.³³ Charging that labor historians need to be more receptive in filling the gulf between these two fields, historian Chad Montrie contended in 2010, “Labor history is incomplete without environmental history, just as it would be greatly diminished without social history, women’s history, the history of race and ethnicity, immigration history, and the history of technology.”³⁴ Bridging this divide can tell us more about the solidarities and divisions between workers based on environmental relationships and experiences, but also about the role of workers in transforming the environment.

During the 1980s and 1990s, environmental historians were as blind to class analysis as labor historians were to the environment. Classic works like Cronon’s

³² See James O’Connor, *Natural Causes: Essays in Ecological Marxism* (New York: Guilford Press, 1998); and John Bellamy Foster, *Marx’s Ecology: Materialism and Nature* (New York: Monthly Review Press, 2000).

³³ Fink, “The Great Escape: How a Field Survived Hard Times”: 109-115.

³⁴ Chad Montrie, “Class,” in *Companion to Environmental History*, ed. Douglas Cazaux Sackman (Oxford: Wiley-Blackwell, 2010), 159-160. See also Montrie’s *Making a Living: Work and Environment in the United States* (Chapel Hill: University of North Carolina Press, 2008); Alan Taylor, “Unnatural Inequalities: Social and Environmental Histories,” *Environmental History* 1, no. 4 (1996): 6-19; and Gunther Peck, “Nature of Labor: Fault Lines and Common Ground in Environmental History and Labor History,” *Environmental History* 11, no. 2 (2006): 212-238.

Changes in the Land (1983) and *Nature's Metropolis* (1991), and Donald Worster's *Dustbowl* (1979), for example, were "holistic" when it came to human societies, not making class or work central components of their analyses. These works oftentimes located the connection between "first nature" (the physical environment) and "second nature," (human altered environments) to use Cronon's terminology, in the market, which offered a strong sense of the contradictions between the market and the environment, but shed little light on the work and class processes underlying and defining these transformations.³⁵ Like these earlier environmental historians, my project is concerned with the connections and tensions between the economic and environmental in the lumber industry, but I find these connections in different places.

Since the mid-1990s environmental historians have begun to establish concepts to link the environmental and the economic in *labor*, as opposed to in the market. This has allowed them to incorporate class and work in a variety of ways, especially through the concept of "working environment."³⁶ Crucially, in his 1995 study, *The Organic Machine: The Remaking of the Columbia River*, Richard White introduced the phrase "knowing nature through labor." White argued, in an (unacknowledged) echo of Marx, that historically humans and nature had been linked through work. "Knowing nature through labor," White suggested, was how people came to learn about and experience their environment, or landscape. Through a focus on how human labor and nature were linked and constituted historically, the divide between the "natural" and the "unnatural"

³⁵ For a critique of Cronon emphasizing his inattention to production and labor, see Philip Scranton, "Commerce and Manufacturing in *Nature's Metropolis*," *Antipode* 26, no. 2 (1994): 130-134.

³⁶ Some historians have also explored explicit labor union and working class environmental politics, see Robert Gordon, "'Shell No!': OCAW and the Labor-Environmental Alliance," *Environmental History* 3, no. 4 (1998): 460-487; Les Leopold, *The Man Who Hated Work and Loved Labor: The Life and Times of Tony Mazzocchi* (White River Junction: Chelsea Green, 2007); and Lawrence Lipin, *Workers in the Wild: Conservation, Consumerism, and Labor in Oregon, 1910-1930* (Urbana: University of Illinois Press, 2007).

blurred.³⁷

Drawing on White's insight, some environmental historians began to focus on workers' interactions with the environment at the point of production. John Soluri, for example, in his *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States* (2005), used the term "working environments" to describe how laborers on banana plantations coped with the difficult conditions and serious risks they faced on the job as they produced and manipulated a specific agro-ecological space. "Working environments," for Soluri, connoted the power of workers to exercise some control over their space, through cutting corners or deceiving bosses on how they were manipulating nature and space, but just as importantly it also suggested the power of companies to create the structures in the first place. In the daily interactions with the plantation environment, workers came to identify varying risks and problems in their employment – some of which they struggled to mitigate, while others remained beyond their control. This theme encapsulates the relationship of labor to nature on a daily basis, and reveals how social power, hierarchies, and inequalities were environmental as well social.³⁸

³⁷ Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill & Wang, 1995). White has been critiqued, most harshly by labor historian Gunther Peck, for not being attentive to the class dynamics that structured how different social groups "knew nature" through their work, but others who have employed White's concept have not flattened class dynamics. See Kathryn Morse, *The Nature of Gold: An Environmental History of the Klondike Gold Rush* (Seattle: University of Washington Press, 2003); and Douglas Sackman, "'Nature's Workshop': The Work Environment and Workers' Bodes in California's Citrus Industry, 1900-1940," *Environmental History* 5, no. 1 (2000): 27-53.

³⁸ John Soluri, *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States* (Austin: University of Texas Press, 2005). Thomas G. Andrew's recent study, *Killing for Coal: America's Deadliest Labor War* (Cambridge: Harvard University Press, 2008), uses a slightly different phrase – "workscape" – to impart a meaning like "working environment," argues they are "place[s] shaped by the interplay of human labor and natural processes. ... not simply land, but also air and water, bodies and organisms, as well as language people use to understand the world, and the lens of culture through which they make sense of and act on their surroundings" (125). Discussion of a "working environment" need not be limited to places where humans overtly and obviously manipulate the "wilderness," as in coal or logging, but can be translated as well to "built environments" like cities or

In this dissertation, I follow White and Soluri's concern with environmental relationships at the point of production, and emphasize the power of firms to control workers through those environments. Alongside this process, as managers and owners sought to control workers, they also attempted to control nature. One of the best ways to see this is through the history of commodification (explored in Chapter 2).

Commodification has been an important concern for historians of capitalism generally, and environmental historians, specifically. Much of Marx's *Capital* was a treatise on the ways that commodities (particularly labor-power and land) have been called into being, often through less than "idyllic" circumstances. More recently, environmental and social historians have created a growing literature of "commodity studies."³⁹ In general, these studies trace the conditions of – and connections between – production, distribution, and consumption of a given commodity, with varying emphases on these three moments. Some of these efforts described the struggles of "knowledge workers" to reinforce and maintain specific environments. While I share this interest in knowledge work during the industrial phase of a commodity's path to market, I also argue that historians need to look at the knowledge work during the struggle over the initial attempt to place a price on nature (and thus commodifying it).

James C. Scott's landmark study, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (1998), perhaps comes closest to the approach present here in his discussion of the efforts of states to create "legible,"

factories. See Arthur F. McEvoy, "Working Environments: An Ecological Approach to Industrial Health and Safety," *Technology and Culture* 36, no. 2 (1995): S145-S173.

³⁹ See, for example, Paul Sabin, *Crude Politics: The California Oil Market, 1900-1940* (Berkeley: University of California Press, 2005); Douglas Cazaux Sackman, *Orange Empire: California and the Fruits of Eden* (Berkeley: University of California Press, 2005); and Soluri, *Banana Cultures*.

“simplified” spaces, whether in a city or in a forest.⁴⁰ Though the “administrative ordering of nature and society” is one of only four features present in “the most tragic episodes of state-initiated social engineering,” efforts to simplify or make legible subjects and environments, Scott argues, constitute a central role of statecraft.⁴¹ Though *Seeing Like a State* focuses (appropriately enough) on states, Scott is open to the idea that capitalist markets – and the price mechanism – can serve a similar simplifying or homogenizing role to the state, a theme obvious in this dissertation. As valuable as Scott’s work is, he does not address substantially the “labor of simplification,” or what I am calling the “labor of commodification.”⁴² My approach adds to studies of commodities by pointing out that the “knowledge work” – the act of the radical simplification of nature – was not simple, automatic, or without difficulties.

In conceptualizing the power of elite control over nature and labor – at the point of production and in the process of commodification – this dissertation contributes to labor and environmental history. More broadly, by stretching the chronology of the lumber industry, being concerned with the spatiality of capitalism at both the local and regional levels, and exploring class and power as sets of social and environmental relationships, I hope to provide a portrait of the lumber industry that suggests its instability and consequent rapid transformation. As such, this dissertation is not a comprehensive history of either Minnesota or Louisiana, but a record of the historically contingent unfolding of a logic and geography of capitalist production in one industry.

⁴⁰ James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998). Scott’s first chapter included a “parable” of simplifying forests in Europe.

⁴¹ Ibid., 4. Geographer W. Scott Prudham’s analysis of the ways the variability of conditions in Pacific Northwest logging defied standardization meshes well with my efforts to explore the labor behind valuing resources. See his *Knock on Wood: Nature as Commodity in Douglas-Fir Country* (New York: Routledge, 2005), 32-33.

⁴² The phrase “social simplifications” is introduced in Scott, *Seeing Like a State*, 3.

III. Sources and Chapters

This dissertation relies on extensive archival research conducted in Minnesota, Missouri, Louisiana, and Connecticut, among other places. Given the “transregional” dimensions of this project, it is essential to explain at the start the comparability of sources used to draw conclusions. Perhaps the most important type of sources used in this dissertation is business records. Lumber firms in Minnesota and Louisiana left behind a tremendous amount of correspondence and reports detailing the day-to-day operations of their firms. Especially in the case of Louisiana, where owners in the north were (physically) far removed from the day-to-day operations of the mills, any problems they faced (from their perspective) were put into letters. Much can be learned from these documents about what was important and troubling to the management in the industry on a daily basis. Other sources crucial for this dissertation include government reports, newspapers, personal letters, and oral histories.

The most obvious obstacle in writing this comparative history came from the imbalance in oral history sources. The Minnesota Historical Society, for example, houses dozens and dozens of oral history interviews (including transcripts) with people who worked in the lumber industry in the state during the late nineteenth and early twentieth century, from logging camp cooks to company presidents. Oral histories publically available dealing with the lumber industry in Louisiana, by contrast, can be counted on two hands. Most of these were collected during the mid-1990s by William Jones as part of the Remembering Jim Crow project at UNC (and which he featured prominently in his book, *The Tribe of Black Ulysses*). One of the reasons for this disparity between the records of each state, in my view, lies in the political climates in each state since the

1950s. The segregationist and conservative state governments in Louisiana at mid-century were unlikely patrons for historians aiming to collect oral history interviews with black lumber workers, while in Minnesota, progressive governments, the ethnic revival of Swedish, Norwegian, and Finnish heritage during the 1960s and 1970s, and the presence of the (corporate-endowed) Forest History Society led the historical society to conduct many oral histories. Though it is impossible to tell the stories for which you do not have sources, the business records on the Louisiana industry help overcome the deficit in oral history. As they did in Minnesota logging camps, managers in Louisiana aggressively controlled the company towns in the state, and their paternalism is evident through their letters. By “reading against the grain,” then, we can reconstruct at least some of the social lives of Louisiana lumber workers. Thus, despite some differences in the sources available, I have been able to build the dissertation in a way that can explain the development of the industry in both places.

The argument of this dissertation and its historiographical contributions are divided into five chapters. Chapter 1, “‘The Great Nomad’: Political Economy and Geography of the U.S. Lumber Industry, 1870s to the 1930s,” provides an introductory overview of the industry in the U.S., with special reference to the development of the industry in Minnesota and Louisiana. It addresses the political-economic structures guiding the production of lumber during the period under study. In particular, it argues that (1) technological, social, and environmental changes in logging and sawmilling, (2) an increasingly corporately organized industry affiliated with trade associations (but a declining market), and (3) federal land and forest policy combined to give shape to the industry’s “nomadic” structure. This chapter relies on a mix of archival documents and

secondary works as it seeks to provide a context in which the subsequent “moments” in the political economy and geography of the industry addressed in the following four chapters can be understood.

In Chapter 2, “The Labor and Nature of Valuing the Forest: Timber Cruisers, the Lumber Industry, and Forestry, 1880-1925,” I consider the process through which timbered land was measured and assigned a market price by lumber companies and, increasingly, the U.S. Forest Service. Exploring the labor of timber estimators – or timber cruisers as they were called – I demonstrate the tensions and problems in attempting to measure and value the economically valuable components of the forest. Frequently, historians have assumed that nature could be valued and used as a starting point for analyses of the industry. In contrast, this chapter suggests that the “radical simplification” of the forest ecosystem into a discrete number of board feet of merchantable timber was fraught with tension. The autonomy and craft skill held by timber cruisers meant that the “manager’s brains” stayed “under the workman’s cap.” During the late nineteenth and early twentieth century lumber companies in Minnesota, Louisiana, and other states found relying on these backwoods craftsmen problematic, as they had difficulty “trusting” their estimates. Newly created forestry schools, looking to demonstrate their worth to the lumber industry, began addressing the problem of timber estimation, researching timber cruising methodologies and training forestry students. The substitution of self-taught timber cruisers for professional foresters represented a shift in the locus of social power and legitimate environmental knowledge.

In Chapter 3, “Working Environments in Logging: Minnesota, 1870-1920s,” the subject shifts from the evaluation of the worth of the forest environment to its

manipulation. The process of logging in Minnesota entailed not just the destruction of old-growth forests, but also the simultaneous creation of new, but temporary, working and living environments at the point of production. Composed of material, spatial, and ideological structures, these temporary and mobile working and living environments created dangerous and unsanitary spaces for workers in the industry, both on-the-job and in the logging camp. Logging firms sought to control worker mobility and conduct, but workers frequently used the mobility and geographic decentralization of the industry against itself by voting with their feet and leaving lumber camps when they needed a rest or sought a different, and hopefully better, camp.

Chapter 4, “Living and Working Environments in Louisiana Mill Towns, 1900-1920,” is a companion to Chapter 3 in that it provides a close-up look at social and environmental relations in the lumber industry, though instead of focusing on logging camps, this chapter examines the company towns where logs were milled into lumber. In contrast to Minnesota, where seasonal labor in logging camps made controlling workers on a permanent basis difficult, Louisiana workers engaged the industry on a more permanent basis. Additionally, and again in contrast to Minnesota, Louisiana was the scene of an overt and protracted confrontation between capital and labor over how the industry should be managed, and for whose benefit. Between 1911 and 1914 the “Louisiana Timber War” pitted the interracial Brotherhood of Timber Workers (BTW) against the Southern Lumber Operators’ Association (SLOA). This dramatic confrontation has passed into the canon of “classic” battles in American labor history and has been reconstructed by several historians. I argue, though, that placing this conflict in context requires a close examination of the “working environments” and “living

environments” that lumber workers faced. Drawing on business correspondence of a few large lumber operators, Pinkerton spy reports, and reports made (but never published) by the U.S. Commission on Industrial Relations in 1914, I point to dangers on the job and the constraints in the company towns as important bases for the struggle. This chapter also incorporates a view of the social relations of Jim Crow in the lumber industry. Finally, this chapter suggests how capital continued to fight not simply over time, but over space as well: the industry was only temporarily in the Louisiana woods. By the 1920s many of the mills and towns that served as key bastions of radical interracial unionism before the First World War had closed and were abandoned.

Chapter 5, “Deindustrialization, Lumber, and the Cutover: Minnesota and Louisiana, 1900-1940,” explores further the impermanence of the lumber industry in Minnesota and Louisiana by addressing the way in which the “cutover” was disposed and used after rapid clear cutting concluded. Unlike many environmental histories of industrial development that close with the decline of the industry in question, I explore the social and environmental consequences of the rapid clear cutting of large swaths of forested land in these states, looking “beyond the ruins” of deindustrialization. In Minnesota and Louisiana lumber companies and boosters pursued a strategy of marketing to poor settlers as prime farmland, and boosters envisioned this region as refuge for the poor and the northern extension of the nation’s breadbasket. During the 1930s, this social vision foundered on a mix of environmental and economic difficulties and the state of Minnesota converted much of the region to publically owned and managed forests.

In the epilogue of the dissertation, I briefly review the central arguments of the dissertation and ask, how the regions “recover” from the movement of the lumber

industry after 1940? Indeed, though after World War II the industry did turn toward sustained-yield production in larger measure, this system has produced its own set of contradictions for workers and the environment, further suggesting the flexibility of the institutional, spatial, and environmental arrangements under which capitalist development can occur.

CHAPTER ONE

“The Great Nomad”: Political Economy and Geography of the U.S. Lumber Industry, 1870s to the 1930s

In his memoir, William B. Greeley, Forester of the United States Forest Service from 1920-1928, argued that the lumber industry’s scale and mobility exploded in the Great Lakes states of Minnesota, Michigan, and Wisconsin following the Civil War. There, according to Greeley, “It became the great nomad among American industries, driving from one virgin forest to another like a threshing machine from one ripe wheat field to the next.”¹ The process repeated itself in the South after 1880 as “company after company cut out in the North, junked the old plant, and trekked with its group of skilled hands to a new location in Mississippi or Louisiana.”² The lifetime of a given mill, Greeley continued, remained remarkably short: “Twenty years, and even less ... Then – dismantle, junk, and move on.” What troubled the retired forester about this history, moreover, was not just the way the industry’s capital moved with reckless abandon, but the condition in which it left the land: “A logged-off section was in the same category as a junked sawmill – to be sold for what it might bring, or abandoned and forgotten.”³

Available data on lumber production in the U.S., which exploded after 1865, support Greeley’s evocative description of the industry’s history and geography. In 1869, the country produced just 12.7 billion board feet, but by 1909 the U.S. charted 44.5 billion board feet a year. Virtually all of this production, meanwhile, was rooted in the consumption of old growth forests. Until after the Second World War, no meaningful

¹ William B. Greeley, *Forests and Men* (1951; repr., New York: Arno Press, 1972), 40.

² *Ibid.*, 42.

³ *Ibid.*, 41.

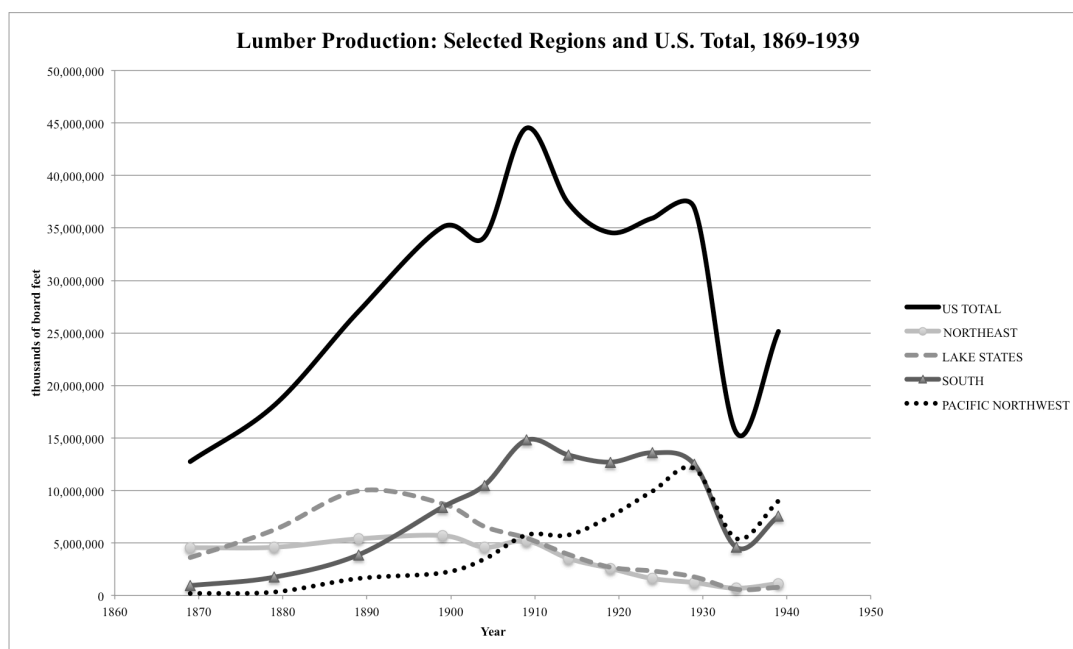


Figure 1.1. Source: Henry B. Steer, *Lumber Production in the United States, 1799-1946* (Washington, D.C.: GPO, 1948), table 4. Figure created by author.

proportion of American lumber production took place in second growth forests.⁴ This fact meant that *where* logging and milling occurred necessarily shifted dramatically, giving the industry its “nomadic” quality (see *figure 1.1*). The Lake States surpassed the Northeast in the 1870s as the largest lumber-producing region, but well before the onset of the Great Depression these states made up only a tiny fraction of total U.S. production. In fact, by 1920 Minnesota was a net importer of lumber.⁵ The South became the leading lumber producing region around 1900 and though its output declined modestly during the 1910s and 1920s, it retained this status until the onset of the Great Depression, when production across the country collapsed. In 1929, the U.S. produced almost 37 billion board feet, but in 1932, that figure fell to just 10 billion board feet. When production

⁴ The pulp and paper industry followed the lumber industry in some parts of the Northeast and the Lake States, utilizing second growth, but it required a far lower tree volume than the lumber industry.

⁵ Michael Williams, *Americans and Their Forests: A Historical Geography* (Cambridge: Cambridge University Press, 1989), 437.

rebounded in the early 1940s under the cloud of war, the Pacific Northwest became the largest manufacturing region. Greeley's evocative imagery of the "threshing machine" and the "great nomad" churning across the land along with this production data provide a view of the industry's successive booms from the 1860s through the 1930s: the Lake States peak, followed by explosions in the South and Pacific Northwest.

What types of trees made the industry gravitate to these sections of the country? The post-Civil War boom in Lake States' lumber production was centered on the logging and milling of old growth Eastern White Pine (*pinus strobus*), a dominant species in the northern parts of Michigan, Wisconsin, and especially Minnesota. Beyond being simply abundant and enormous trees, white pine has several traits that made it desirable for producers: it grows very straight with few knots, is soft and easy to cut, desirable for use in construction, and buoyant.⁶ Yellow pines, meanwhile, accounted for over 75 percent of Louisiana's total lumber production in 1914. "Yellow pine" actually refers to a group of southern pine species, principally Longleaf Pine (*pinus palustris*), Loblolly Pine (*pinus taeda*), Shortleaf Pine (*pinus echinata*), and Slash Pine (*pinus elliottii*). At its peak, Louisiana's boom in these yellow pine species made up approximately 27 percent of the southern states' yellow pine production (see *figure 1.2* and *figure 1.3*). In the Pacific Northwest, Douglas-Fir formed the backbone of the industry.

As the industry removed the softwood lumber species indigenous to these regions of the U.S., the locations of logging and milling *within* each region also moved. When Charles Sargent completed his *Report on the Forest Lands of North America (exclusive of Mexico)* for the Census Bureau in 1884, for example, he did not seem overly impressed

⁶ Red pine (*pinus resinosa*, often called Norway pine during the nineteenth and early twentieth century) though rarer in Minnesota's forests also possesses these features and was cut extensively in the state.

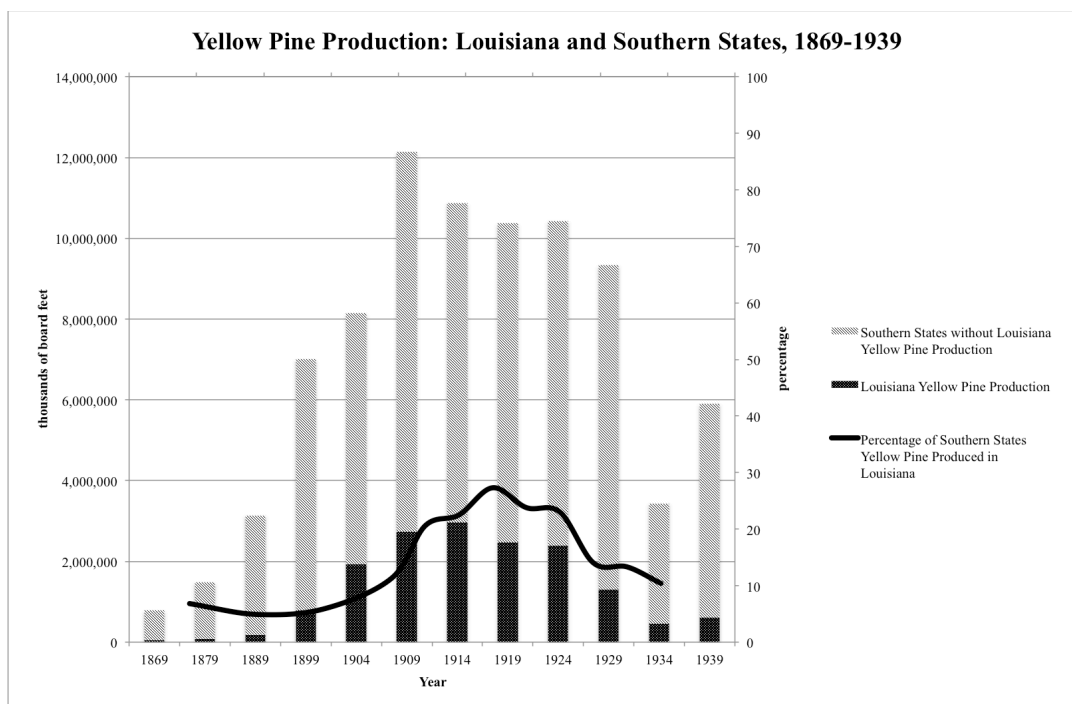


Figure 1.2. Source: Henry B. Steer, *Lumber Production in the United States, 1799-1946* (Washington, D.C.: GPO, 1948), tables 6-46. Figure created by author.

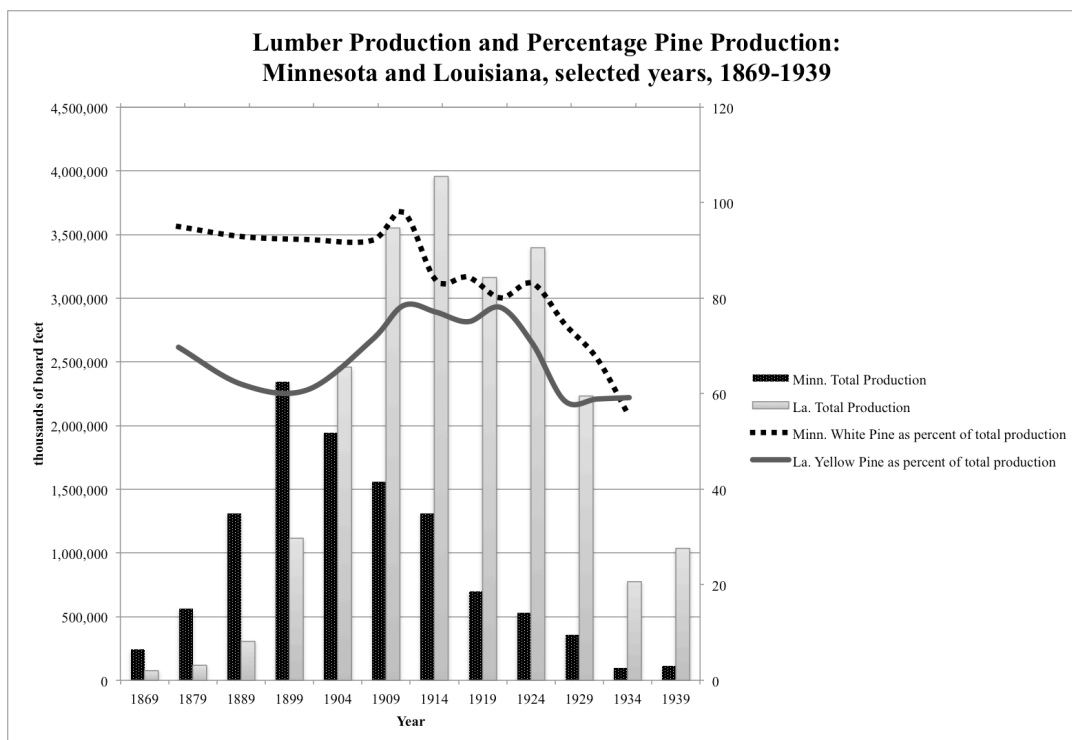


Figure 1.3. Source: Henry B. Steer, *Lumber Production in the United States, 1799-1946* (Washington, D.C.: GPO, 1948), tables 4, 6-46. Figure created by author.

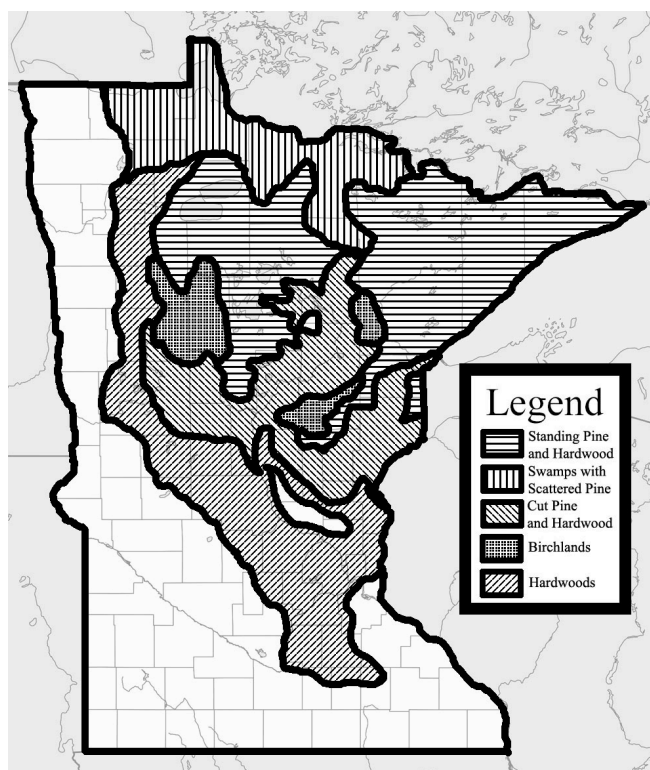


Figure 1. 4. “Map of Minnesota showing the distribution of forests, with special reference to the lumber industry, 1881.” Adapted by author from Charles S. Sargent, *Report on the Forests of North America (Exclusive of Mexico)* (Washington, D.C.: GPO, 1884), 558. Base map in the public domain [Wikimedia Commons]. The map showed the hardwood belt lining the southwestern edge of Minnesota’s forests, while also describing the patchwork of pine forests lying to the north and the east in the state. Though “cut pine and hardwood” lands seem rather extensive, as production methods changed many lands were logged again, removing trees that would have been uneconomical to log earlier.

by the forests he saw in Minnesota. In fact, he found that “the pine has been removed from the principal streams, is now inaccessible or of comparatively inferior quality [than existed in Wisconsin].”⁷ His map of the state (*figure 1.4*) visually demonstrated this assessment that the best lands for logging had already been exploited. Lumber capitalists over the following decades proved Sargent’s analysis incorrect, as they increasingly found ways to log previously “inaccessible” forests and move production further north in the state. Additionally, this boom in northern Minnesota white pine lumber production

⁷ Charles S. Sargent, *Report on the Forest Lands of North America (Exclusive of Mexico)* (Washington, D.C.: GPO, 1884), 558.

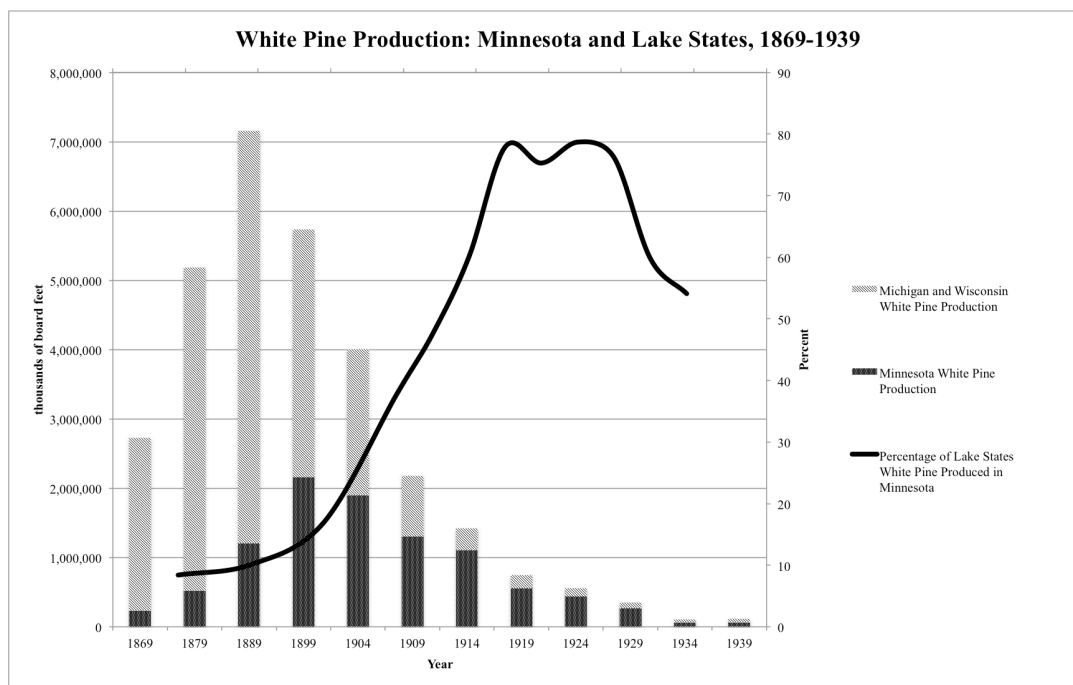


Figure 1. 5. Source: Henry B. Steer, *Lumber Production in the United States, 1799-1946* (Washington, D.C.: GPO, 1948), tables 6-46. Chart created by author.

actually trailed the boom in the Lake States as a whole by about ten years, due to the greater distance from established labor markets and distribution hubs than parts of Michigan or Wisconsin. Though the census of 1890 revealed the peak in total Lake States production at just less than 10 billion board feet annually in 1889, Minnesota hit peak production in 1899 (almost twenty years after Sargent’s report). *Figure 1.5* shows this relationship for white pine production specifically, where Minnesota’s proportion of overall Lake States output climbed dramatically (to 80%) as the total volume of white pine produced in the region fell after 1890. In contrast to Minnesota’s “trailing” lumber boom, Louisiana’s production conformed to the timing of the South’s overall boom in yellow pine. When Sargent wrote about Louisiana’s forests in the early 1880s, he pointed out, “The most valuable forests in the state are still almost intact,” with the “pine flats” in the western part “formed almost exclusively of the long-leaved pine, which farther north,

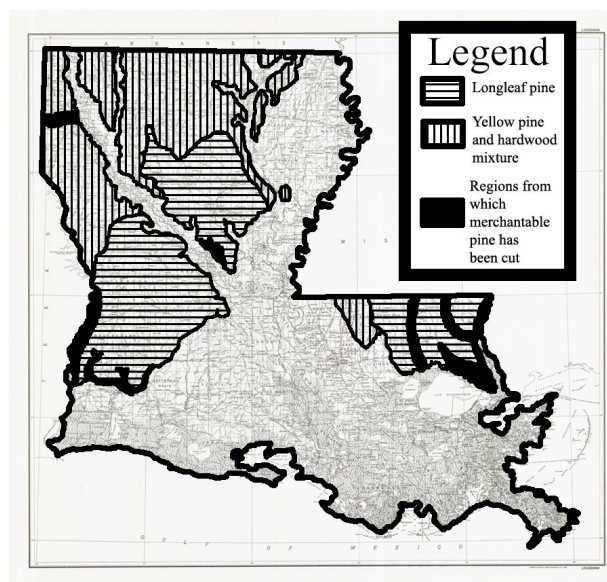


Figure 1. 6. “Map of Louisiana, showing the distribution of pine forests, with special reference to the lumber industry, 1881.” Adapted by author from Charles S. Sargent, *Report on the Forests of North America (Exclusive of Mexico)* (Washington, D.C.: GPO, 1884), 536. Base map in the public domain [U.S. Geological Survey]. The map Sargent made shows the limited extent of logging in Louisiana during the early 1880s, principally confined to the Sabine River valley (on the border with Texas), and adjacent to the north shore of Lake Pontchartrain (north of New Orleans).

mixed with oaks and various hardwood trees, extends over the high rolling country which stretches from the Sabine northeasterly nearly to the Ouachita river” (*figure 1.6*).⁸ As in Minnesota, logging in Louisiana moved within the state as new stands were cut in order to feed the mills.

The geography of the lumber industry in the U.S., then, is the story of inter- and intra-regional movement. The mobility of production in the lumber industry, though, is only described by Greeley, Sargent, and statistical evidence. It is not, however, explained. This chapter thus begins with these descriptions, but explores and explains the sets of institutions and practices that made the lumber industry “nomadic” during the late nineteenth and early twentieth century. After briefly describing the early American lumber industry, I show how three forces contributed to this historical and geographical

⁸ Sargent, *Report on the Forest Lands of North America*, 536.

characteristic. Specifically, (1) the changing technology and labor process of logging and its relationship to the environment; (2) federal land and anti-trust policies; and (3) state and federal forestry programs combined to shape an increasingly concentrated and capital-intensive industry. As a result these forces the industry was also beset by crises of overproduction and low prices between the close of the Civil War and the end of the Great Depression. The movement of the industry – the “lumberman’s frontier,” as one historian calls it – was a direct result of these interactions.⁹ Throughout, evidence from Minnesota and Louisiana serves to highlight this national story. Subsequent chapters draw on the context of this political-economic geography and history showing how workers and environments defied expectations of managers and owners, in the act of valuing the forests, at the point of production, and in successive regional deindustrializations.

I. The Early American Lumber Industry

When European colonists arrived in New England in the seventeenth-century, they encountered a landscape of fields and forests already deeply shaped by human labor. In the 1620s, William Wood commented on the forests of Massachusetts Bay: “Whereas it is generally conceived that the woods grow so thick that there is no more clear ground than is hewed out by labor of man ... it is nothing so, in many places diverse acres being clear so that one may ride ahunting in most places of the land if he will venture himself for being lost.”¹⁰ The lack of underbrush, he observed, was the result of the Native

⁹ Thomas R. Cox, *The Lumberman’s Frontier: Three Centuries of Land Use, Society, and Change in America’s Forests* (Corvallis, Ore.: Oregon State University Press, 2010).

¹⁰ William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983), 26. On environmental changes wrought by Native Americans across North and

Americans living in southern New England who set fires, consuming “all the underwood and rubbish which otherwise would overgrow the country, making it impassable, and spoil their much affected hunting.”¹¹ Despite the earlier manipulations of forest environments practiced by Native Americans in New England and elsewhere, the arrival of Europeans in North America set off what geographer Michael Williams called “possibly the greatest single factor in the evolution of the American landscape,” namely, “the clearing of the forests that covered nearly half the country.”¹² Colonists across the eastern seaboard used wood as their main material for heating, construction, transportation, and also incorporated it as a raw material in early industry. Though forests were a critical source of colonists’ material wealth, they also seemed to stand in the way of progress, as clearing forests for agricultural development could be backbreaking work. Simply cutting and burning the forest where it stood thus cleared much agricultural land.

Water-powered lumber mills did exist in colonial and early republican U.S. history, but these enterprises remained small and mainly served local markets and offering supplementary work to farmers. Even if it had somehow been possible to cut down and mill lumber on a much larger scale, with poor roads there were no easy ways to transport it, and few markets to sell it in. In the regions of the country where long distance lumbering did occur, it was rafted to market on rivers. An industrial lumber industry, then, did not develop to any great size until the market and industrial revolutions of the early nineteenth-century began to transform life in the United States,

South America, see Charles C. Mann, *1491: New Revelations on the Americas Before Columbus* (New York: Knopf, 2005).

¹¹ Cronon, *Changes in the Land*, 49.

¹² Williams, *Americans and Their Forests*, xvii.

including work practices, relationship to markets, and transportation.¹³ Out of a rural-agricultural society, an urban-industrial economy grew, and along with it the lumber industry expanded. After 1820, Maine became one of the first places where the industry advanced on a large scale. On the Penobscot River, Bangor became the hub of this activity, with over 171 million board feet shipping from the city by boat in 1845. Already by that time, though, New York and Pennsylvania each produced more lumber than the Pine Tree State. Much of this lumber production still served as an adjunct to agricultural development, but increasingly as mid-century approached, in all of these states lumber became seen as a source of wealth (for capitalists) and permanent employment (for workers) on its own terms, and land was desired primarily for the timber it contained as opposed to its future agricultural potential.¹⁴ Lumbering in Pennsylvania did not peak until the 1870s, but by that time the Lake States were already passing the Northeast in overall production.

Beginning in the 1840s, the lumber industry in the Lakes States grew in response to increasing demand for lumber in the Midwest. The plains farms being carved out of the prairies and hardwood forests of Ohio, Indiana, Illinois, Missouri and Iowa quickly outstripped their local timber supply. White pine from northern Michigan, Wisconsin, and Minnesota became the essential construction material in the region for both buildings and railroads. Because of this demand, the commercial lumber industry in Minnesota actually preceded statehood by almost twenty years, when in 1839 a group of settlers

¹³ On the market revolution, see Bruce Laurie, *Artisans into Workers: Labor in Nineteenth Century America* (New York: Hill and Wang, 1989); Christopher Clark, *The Roots of Rural Capitalism: Western Massachusetts, 1780-1860* (Ithaca: Cornell University Press, 1990); and Charles Sellers, *The Market Revolution: Jacksonian America, 1815-1846* (New York: Oxford University Press, 1991).

¹⁴ Cox, *The Lumberman's Frontier*, 50, 72, 122-3. On the lumber industry in Maine, see also Richard W. Judd, *Aroostook: A Century of Logging in Northern Maine* (Orono, Me.: University of Maine Press, 1989).

established a sawmill on the St. Croix River, northeast of the present day Twin Cities, and shipped their products to downriver markets in Wisconsin and Illinois.¹⁵ The treaty signed by the Ojibwe two years earlier ceding the land that would become much of western Wisconsin and eastern Minnesota to the U.S. Government was even known as the Lumberman's Treaty.¹⁶ Sawmills also began appearing on the Mississippi River in Minneapolis, where St. Anthony's Falls provided ample water power for lumber and (later) flour mills. Ultimately, Minnesota's lumber industry was wedded to the political economy of the state from the start, though its organization, location, and methods would change during the second half of the nineteenth century.

As William Cronon explored in *Nature's Metropolis*, Chicago became an important lumber market during the post- Civil War period when mills on the shores of Lake Michigan (from both the Wisconsin and Michigan sides) floated their finished products to the yards of that city, where they could be purchased and switched to rail for further distribution at retail yards.¹⁷ In western Wisconsin and Minnesota, meanwhile, loggers and lumber mills gathered on the Mississippi and St. Croix Rivers, floating massive log booms down to Iowa mills or shipping finished products by raft to Iowa or Missouri lumber yards. Though the use of rivers and streams to move logs was theoretically free, these activities became increasingly capital-intensive and under the control of larger lumber producers. The Beef Slough Logging Company and the Mississippi River Logging Company were each consortiums of lumber and logging companies established in 1867 and 1871, respectively, that cooperated in the maintenance

¹⁵ Agnes M. Larson, *The White Pine Industry in Minnesota: A History* (1949; repr., Minneapolis: University of Minnesota Press, 2007), 15. Fort Snelling, completed in 1825, had a sawmill earlier.

¹⁶ Cox, *The Lumberman's Frontier*, 155.

¹⁷ William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W.W. Norton, 1991).

of critical waterways and in shipping logs to mills to its south. In all of this activity, the role of the rivers was essential to the workings of the industry. Gradually, however, new methods of logging, and the ongoing deforestation of lands accessible to the Mississippi or St. Croix, meant that the industry shifted into the northern part of the state, and relied increasingly on railroads to ship cut white pine.

In contrast to Minnesota, where as European-American settlers arrived in the 1830s much of the territory was still in control of Native Americans, Louisiana was among the oldest places of European settlement in North America. Plantation slavery and agricultural production, of course, dominated much of that history. The funneling of capital into chattel slavery on the agriculturally productive lands of southern Louisiana resulted in much of the northern part of the state remaining forested and sparsely populated by small farms throughout the antebellum period. According to the 1870 census, for example, northern and western Louisiana recorded a population of 245,647 out of a total population of 726,915 (33 percent), though it accounted for more than 60 percent of the state's area.¹⁸

Although European-Americans had used southern forest products for centuries, especially in the gathering of naval stores and lumber on the coastlines and along rivers, it was not until after the Civil War that Louisiana and other southern states attract industrial investments from Northern capitalists, greatly expanding the scope of the regional industry. More generally, garnering industry and migrants meant, in part, advertising the “natural” benefits of the region. In 1876, for example, booster Daniel Dennett published *Louisiana As It Is*, a guide for “farmers, patrons of husbandry, laboring

¹⁸ U.S. Census Bureau, 1870 census, Population, created February 2012, prepared by SocialExplorer.com, <http://www.socialexplorer.com/pub/ReportData/htmlresults.aspx?ReportId=R10173442&TablesPerPage=50&Page=5>.

men, manufacturers, capitalists, men of enterprise, invalids – any who may desire to settle or purchase lands in the gulf states.” His guide described the potential bounty of Louisiana: “In fact when we consider her natural resources, and the advantages she possesses from her climate, soil and location, it is simply impossible to speak of her in terms of praise too strong.”¹⁹ With respect to forests, Dennett explained that they contained “values which her citizens but poorly appreciate. While the Northern and Western States have nearly exhausted their lumber resources ... Louisiana has immense forests of the finest timber on this continent.”²⁰ While Dennett’s optimistic tone was unflappable, he cautioned that without the application of labor, “The wealth stored up in her inexhaustible soil, though it be as great as that of Ophir, or that once hidden in the quartz rock and sand of California, will remain forever buried, unless brought to light by intelligent and persistent labor.”²¹ The redeemer governments coming to power across the South during the 1870s coincided with fears that a “timber famine” lay in the future of the nation as eastern and northern stands continued to be cut. Fortunately for lumber capitalists, land policy in the South abetted their desire to take Dennett’s advice and bring “persistent labor” to the southern forests.

II. The Production Process: Turning Trees into Logs, Logs into Lumber

The development of an industrial economy requiring an increasingly large amount of lumber resulted in a transformation in how lumber itself was produced, both in logging

¹⁹ Daniel Dennett, *Louisiana As It Is: Its Topography and Material Resources ... Reliable Information for Farmers, Patrons of Husbandry, Laboring Men, Manufacturers, Capitalists, Men of Enterprise, Invalids – Any Who May Desire to Settle or Purchase Lands in the Gulf States* (New Orleans: “Eureka” Press, 1876), 35.

²⁰ *Ibid.*, 130.

²¹ *Ibid.*, 35.

and sawmilling, and contributed to the “nomadic” quality of the industry. In an increasingly complex and capital-intensive process, the Lake States were one of the first large areas where widespread clear-cutting of forests was practiced. Whereas in Maine, and even Pennsylvania, logs could only be transported short distances via an immediately adjacent river, developments in the Lake States challenged this equation and allowed firms to extract more of the “merchantable timber” from each acre. Though Sargent worried that Minnesota’s best timber had been already cut or was “inaccessible,” the industry’s actions rendered this appraisal untrue. As one logger near the Jump River in Wisconsin reported back to the Laird, Norton Company (with a mill downriver on the Mississippi at Winona, Minnesota) in 1886: “I don’t think we will have any difficulty as far as the cleaning up is concerned, because I have cut everything with a green top.”²² Despite the increasing ability of firms to extract timber from the land, the environment in which they cut and transported massive white pine trees relied heavily on particular environmental conditions – especially precipitation and temperature – to be successful.

The lumber industry in the Lake States from the 1870s through the 1930s was wedded inextricably to the changes of the seasons. Each winter, logging camps sprouted up across northern Minnesota, Wisconsin, and Michigan, and logging crews cut and collected logs, relying on the frozen ground and snow to aid the movement of these logs to a stream or pond. In the spring, with the aid of runoff from melting snow accumulating behind small logging dams, workers ran these logs through a series of streams to the mill. If the mill lay further down a major river, like the Mississippi, these logs would be tied together and rafted until they reached the mill’s holding pond downstream. Once the

²² D. Dyer, letter to Laird, Norton Company, February 22, 1886, Box 8, Laird, Norton Company corporate records (ALPHA), Minnesota Historical Society (hereafter Laird, Norton Company records).

season's logs reached the mill, workers sawed until the mill ran out of its raw material, usually in the late summer or fall. Early in the winter the process began again on new sections of forest.

Though in popular culture imagery lumberjacks are often accompanied by an ax, this tool had been replaced in large measure by the crosscut saw in the 1870s as the main implement for felling trees.²³ Armed with a set of steel teeth and handles on each end, two men wielded this long thin saw. After a notcher (who still used an ax) marked where the undercut in the tree should go (thus determining the direction the tree would fall), a crew of sawyers felled the tree and sawed it into logs.²⁴ Felling a tree, the first step in the skilled and dangerous work of logging (described in more detail in Chapter 3), in some ways represented the “easy part” of the process: after the cuts were made, gravity brought the tree down. After the tree had been felled, an arduous process really began. Sawed into logs, and small branches removed, loggers “skidded” it – basically pulled it – across the snow to a central collection point by a horse or oxen team. Since dragging an old growth 16-foot long white pine log is no easy task even for draft animals, workers placed the front end of the log on a “yarding sled” or “go-devil” that would make sliding it across the ground easier for the animal.

Early logging in Minnesota, as in previous lumber centers, would have meant that loggers skidded directly to the landing area of a lake or stream, where during the spring “river men” guided the floating logs to the mills in huge log drives. In order to access more distant stands of white pine, however, several miles might have been necessary to cross before the appropriate stream or lake, or later a railroad spur, were reached.

²³ Larson, *The White Pine Industry in Minnesota*, 176.

²⁴ Cutting the tree into logs where it lied was known as the “Canadian way,” and became necessary if the log would not be dragged immediately to the river, but carried a long distance on a sled.

Loggers developed methods to meet this challenge and increasingly by the 1870s they relied on the operation of snow roads and ice roads. With ice roads, logging outfits created trails with iced ruts where the runners of large sleds carrying white pine could be pulled by draft animals. Though these roads required considerable labor to build and maintain – crews went out each night to water the tracks – they represented a major improvement over skidding a single log. Ralph Bryant, a professor in the forestry school at Yale University, estimated in 1923 that a single two-horse team could haul a sled containing between 2,500 and 4,000 board feet and could complete two round trips on an ice road six miles long per day.²⁵ During the 1890s, loggers successfully introduced mechanical steam haulers in place of horse drawn sleds. Steam haulers resembled small railroad engines with tractor treads in the rear and skis in the front, or something like oversized postmodern, steampunk snowmobiles. These steam haulers also pulled sleds on snow or ice roads, and though they increased the capital requirements of a logging operation, they could move considerably more lumber than draft animals: Bryant reported that in Minnesota a train of nine sleds each bearing 12,000 board feet had been pulled by one hauler.²⁶

The rather elegant solution of using ice to move a bulky commodity across a relatively flat landscape could suffer from at least one major flaw. As a logging boss near Hinkley, Minnesota explained to the managers of the Laird, Norton Company in

²⁵ Ralph Clement Bryant, *Logging: The Principles and General Methods of Operation in the United States*, 2nd ed. (New York: John Wiley & Sons, 1923), 178.

²⁶ *Ibid.*, 182. Horses and oxen remained essential for short distance skidding across the country until well into the twentieth century. “Steam skidders” and “donkeys” gradually replaced the use of draft animals for short distance log transport. Though there were a number of variations on this machine, essentially the steam engine would power cables that dragged logs to the collection point (frequently a rail spur). The logging operation described in Ken Kesey’s popular novel, *Sometimes a Great Notion* (New York: Viking, 1964), features logging using a diesel or gasoline donkey. In log hauling, after 1910, gasoline powered caterpillar tractors began to replace horses and steam haulers in the Lake States woods for sledding logs.

December 1886: “We have not done much yet. We have lots of snow but there is no frost in the ground. The swamps are as soft as in summer. A man is liable to lose a [draft] team at any time.”²⁷ Ultimately, for this process to work as stated, the weather needed to cooperate: cold and snow were required. The records of lumber companies and logging contractors in the state from the nineteenth and early twentieth century are peppered with references to the quality of the weather because it played such a determining role in the extraction process. The Weyerhaeuser-owned Pine Tree Manufacturing Company kept a careful watch on the weather as they logged. On January 14, 1914, in the middle of the logging season, the logging department reported back to the main office, “The weather has turned very warm since yesterday evening about 20° at least. The thermometer is now registering 32° above. ... The water tanks are running every night and they manage to keep the road looking in pretty good shape.”²⁸ The next day the logging boss reported that the situation had not improved: “The weather is continuing to keep soft here today. Camp #2’s long road from sec. 9 is being hit the hardest[,] the water-tanks did not do much good last night because the water wouldn’t freeze, but they all run so they got what good they could out of them.”²⁹

On January 19, five days after the first report of warm weather, the movement of logs had been brought to a near halt. The logging manager reported:

The temperature has not been down to the freezing point for the last two days. So the water-tanks have been not of much benefit to us. It takes a lot of work to get logs to the land now, the roads are almost giving out. There is an army of men trying to keep snow on the roads so as to keep them from getting black. ...

²⁷ Welch and Donovan, letter to Laird, Norton, December 13, 1886, Box 8, Laird, Norton Co. records.

²⁸ Pine Tree Manufacturing Company, letter to office in Little Falls, January 14, 1914, Box 3, Immigration Land Company papers (P940), Minnesota Historical Society (hereafter ILC papers). In 1912, Pine Tree Lumber Company changed its name to Pine Tree Manufacturing Company. For ease of reading, all references are to Pine Tree Manufacturing Company.

²⁹ Pine Tree Manufacturing Company, letter to office in Little Falls, January 15, 1914, Box 3, ILC papers.

Hopefully the Weather-man will soon change his mind and let us have a little winter this year.³⁰

Eventually, the “Weather-man” acceded to the logging boss’s wish and cold temperatures returned to Minnesota. On January 24, he wrote: “We have had ideal weather for logging for the past week. There is about 8 or 9 inches of snow and the thermometer has been below zero all the time.”³¹ During the winter, firms’ main environmental concern revolved around temperature, but as ice melted in the spring, their concern shifted to the amount of water available to drive logs on rivers to mills.

While the establishment of ice roads and logging camps were annual affairs, if a lumber firm knew it would use a river over the course of several years it often installed dams to help control water levels as it ran its logs to a mill. The water level of rivers greatly impacted the ability of lumber operators to move the logs accumulated during the winter to their mills. The status of log drives was thus of great importance to lumber mill owners, and correspondence is filled with discussions with subcontractors or subordinates leading the drives. In April 1912, J.M. Quinn led a drive of logs for the Pine Tree Manufacturing Company down the Crow Wing River to its mouth on the Mississippi and down that river to Pine Tree’s mill at Little Falls, Minnesota. He wrote, “There is fair driving state [high water level] in Crow Wing now. When the ice went out of Long Prairie River last Friday of course it raised the Crow Wing River. The ice took most of the logs along with it, but it left quite a heavy rear.” As the spring thaw sent water rushing through the Crow Wing, Quinn remained nervous about the ability to get the rest of the logs down to the Mississippi. He wrote, “I will try and get the logs out of this state of water if possible. Of course you know the Crow Wing River falls fast. If there are any

³⁰ Pine Tree Manufacturing Company, letter to office in Little Falls, January 19, 1914, Box 3, ILC papers.

³¹ Pine Tree Manufacturing Company, letter to office in Little Falls, January 24, 1914, Box 3, ILC papers.

river drivers at Little Falls I wish your men would send up a few and send them to the rear at once, say five or six men.”³² Timing was everything with these log drives, and Quinn responded to the changes in the weather by quickly requesting workers to move the logs while conditions were right.

In a strategy inherited from the Maine and Pennsylvania industries, firms also jointly established companies on busy logging rivers to drive and boom logs to the appropriate mill. The Beef Slough Boom Company operating at the junction of the Chippewa and Mississippi Rivers on the Wisconsin and Minnesota border constituted such a company with involvement from many of the major Great Lakes lumber firms.³³ The Boom Company funneled logs out of the main branch of the Chippewa River and into Beef Slough, where it sorted logs and then sent them downstream in booms to mills along the Mississippi, in eastern Minnesota. During the 1870s and 1880s, the Beef Slough Boom Company operation depended upon, but could also be disrupted by, the use of dams on the Chippewa used to move logs even after the spring thaw. Thomas Irvine, secretary of the company, wrote in 1882: “We had a flood from Little Falls [Wisconsin, not Minnesota] last Saturday, which brought into the slough from 15 to 20 million feet. We expect another flood in a week or ten days and will then begin rafting again.”³⁴ Ten days later Irvine seemed less optimistic, “We were somewhat in doubt as to the possibility of getting logs down the rafting works on this state of water. The shutting down of dams up river of course interferes seriously with our driving in the slough, as it

³² J.M. Quinn, letter to C.A. Weyerhaeuser, April 9, 1912, Box 1, ILC papers.

³³ See Larson, *The White Pine Industry in Minnesota*, 136-146, for discussion of the “Beef Slough War” and the ownership of the company.

³⁴ Thomas Irvine, letter to Laird, Norton, August 8, 1882, Box 8, Laird, Norton records.

about dries us up.”³⁵ With a finite amount of water, those with logs further upriver could stop downriver operations. As September began Irvine reported exactly this process: “We have had to suspend work today. The dams on Chippewa [River] being closed we have no water coming through ... and consequently the rear drive had to hang up. ... while it remains shut off there is no possibility of doing anything here.”³⁶ Fluctuations between years on the Chippewa could be as dramatic. In 1877 the lack of snowfall stranded logs upriver and resulted almost a complete failure of that year’s drive, while in 1880 a massive flood washed out upriver dams and sent somewhere between 150 and 250 million board feet of logs down the Mississippi as far as St. Louis.³⁷ Irvine’s less dramatic experiences on the Chippewa, as much as the reports to Pine Tree Manufacturing about the warm weather in the woods during the winter, illustrate how certain environmental conditions both enabled and inhibited the ability of lumber firms to conduct their operations.

After the 1880s, however, firms in Minnesota began a shift away from the technologies that depended on the cooperation of the weather and the seasons, and instead began to favor the adoption of railroad technologies in logging, a transition that became central to logging in Louisiana as well. The transition toward railroad technology coincided with a northward shift in the industry in Minnesota. The Laird, Norton Company, along with many other lumber mill operators in the southern part of the state had cut out their holdings accessible by water from the St. Croix valley in Wisconsin and Minnesota, and new mills far north of the Twin Cities, now with access to the mainlines

³⁵ Thomas Irvine, secretary of Beef Slough Boom Company, letter to Laird, Norton, August 18, 1882, Box 8, Laird, Norton records.

³⁶ Thomas Irvine, letter to Laird, Norton, September 6, 1882, Box 8, Laird, Norton records.

³⁷ Cox, *Lumberman’s Frontier*, 177.

of the Northern Pacific or Great Northern railroads, began establishing mills with rail connections. The development of logging by rivers (and the infrastructure required to maintain this system) happened in part because the industry preceded the introduction of railroads into the state. This system left loggers and sawmill owners vulnerable to variations in weather and water levels, and also resulted in sometimes-significant losses of logs in the movement from forest to factory. The loss of stock during a log drive due to stranded, sunken, or damaged logs could range depending on the conditions and length of the drive anywhere from almost no loss to as much as 30 percent.³⁸ Minnesota received the first rail connections in the late 1860s but other connections quickly followed.³⁹ As rail connections increasingly wedded the state and the nation together during the 1870s and 1880s, however, lumber operators were quick to either bring rail to their mills or build mills further north in Minnesota with rail links. They also extended temporary spur rail lines into the woods to either complement the shipment of logs by water to an intermediate point, or directly from the forest onto rail cars. The Pine Tree Manufacturing Company, for example, in addition to moving logs to its mill in Little Falls, also used the railroad to log during this period. During the summer of 1912, for example, Pine Tree told the Minneapolis, St. Paul and Sault Ste. Marie Railroad (Soo Line) where it required logging spurs off its line for the following winter. One line would be a short spur to load logs and at least one other line would extend several miles into the forest. Collectively, it planned to use these spurs to move about eighteen or nineteen million board feet.⁴⁰ The

³⁸ Bryant, *Logging*, 384-385.

³⁹ Richard S. Prosser, *Rails to the North Star: One Hundred Years of Railroad Evolution in Minnesota* (Minneapolis: Dillon Press, 1966); and Frank A. King, *Minnesota Logging Railroads* (1981; repr., Minneapolis: University of Minnesota Press, 2003).

⁴⁰ Pine Tree Manufacturing Company, letter to G.R. Huntington, general manager, Minneapolis, St. Paul, and Sault Ste. Marie Railroad, July 5, 1912, Box 1, ILC papers.

introduction of railroads facilitated the northern intra-regional movement of the industry.

In Minnesota, however, there was never a complete transition to railroad logging, and there remained a mix of technologies and methods for getting logs to mills. Leonard Costley, who worked as a logger for a subcontractor of the Pine Tree Manufacturing Company during the first decade of the 1900s, explained how various technologies for moving logs could be strung together in order for firms to get logs to their mills:

On ordinary logging roads, like the logging roads we had when we were logging off Itasca State Park, we had about an 18-mile haul and used from 10 to 15 sleighs, grouped in trains, and those sleighs would carry on an average from 10,000 to 15,000 [board feet] apiece. In other words, they figured at least 150,000 board feet for every trip the steam hauler made from the Park to the landing at Two inlets.

After reaching the landing, logs were then “driven down to Hay Creek into the Fishhook string, and loaded at Fishhook Lake and shipped [by rail] to Little Falls, Minnesota.”⁴¹

Likewise, the Atwood Lumber Company, with a mill on the Willow River, and owning some 58 million board feet of white and Norway pine in the northern part of Minnesota combined rail and water logging. The company reported in 1897 that it ran seven different dams on the Willow and related streams and ponds in order to get its lumber to its mill, but also contracted with the St. Paul & Duluth Railroad for logs arriving at its mill by rail. In 1896, Atwood manufactured 11.9 million feet, but it did so while only able to use its sawmill for 104 days.⁴²

Without the cold winters or networks of lakes and rivers that shaped logging in Minnesota, the Louisiana lumber industry depended almost entirely on the establishment

⁴¹ Leonard Costley, interviewed by Bruce C. Harding, August 3, 1957, Interviews with Pioneer Lumbermen (P2385), Minnesota Historical Society, 10.

⁴² “Company Report,” January 1, 1897, Atwood Lumber Company papers (P906), Minnesota Historical Society. It ran out of logs to saw in August, though this may have been an unusually short season for the firm.

of networks of logging spur railroads, making it more independent of climatic variations. The system of logging by rail also gave the industry the ability to log and mill all year round, meaning that capital was put to more continuous use and thereby allowed a mill to saw more lumber even without advances in sawmill capacity or productivity. However, weather still could interrupt the production process. After a “severe rain and wind storm,” the superintendent of a Louisiana Central Lumber Company sawmill wrote to the general manager of the company:

[W]e are unable to get to the woods. We did not run the saw mill or planer yesterday, nor or we running today [*sic*]. The water flooded our engine room causing the main drive belt to come unglued, but think we can start up both planer and saw mill tomorrow morning. ... Our railroad is damaged considerable several bridges being damaged. I had taken an engine out yesterday, and went out as far as I could go then walked out. The Chickasaw bridge which is a piling bridge the stringers [part of the rail bed] and track had floated up off the piling.⁴³

In addition to the problems that flooding could cause for railroad right of ways, constant rains also could make reaching the woods a problem, as the Louisiana Central Lumber Company reported to its president in 1905: “I was out in the woods again yesterday and the daily rains for the past two weeks have made the logging almost impossible. The ground looks like a big swamp or mud hole. You can hardly ride a horse through the woods.”⁴⁴

With the volume of logs entering the nation’s sawmills increasing during the nineteenth century and technology for moving them developing rapidly, the process of cutting logs into lumber also changed. Additionally, though no one mill cut a very high percentage of the nation’s total lumber output, the size of mills and the percentage of the

⁴³ J.P. Collins, letter to C.E. Slagle, May 27, 1909, f. 512, Louisiana Central Lumber Company papers (C3660), Western Historical Manuscript Collection – University of Missouri-Columbia (hereafter LCLC papers).

⁴⁴ C.E. Slagle, letter to J.B. White, June 29, 1905, f. 194, LCLC papers.

nation's wood they cut was certainly unevenly distributed. In 1919, of the 26,879 sawmills operating in the U.S. sawing more than 50,000 board feet per year, 792 mills (or 2.9 percent of the total number of mills) accounted for 54.6 percent of all lumber cut in the country and each cut over 10 million board feet. At the other end of the spectrum, some 18,396 mills (68.4 percent of all mills) accounted for just 10.1 percent of lumber production. These small mills were referred to as "peckerwood" mills, serving local markets and operating irregularly.⁴⁵

Obviously, given the range of mill sizes, production processes and mill technology varied considerably. Still, for medium- and large-sized mills producing the bulk of timber in the country, two main shifts in sawmills occurred in the lumber industry during the nineteenth century: the source of the mill's power and the type of saw used. As the century wore on, firms increasingly relied on steam power for their mills. The very waste produced in sawing logs was used to power boilers, while a system of belts and pulleys connected this energy to mill equipment. The shift to steam allowed mills to be situated away from water sources, like St. Anthony Falls in Minneapolis, and increase the speed of the saws (and thereby output per hour). Second, during the nineteenth century, the primary type of saw used to turn logs into lumber shifted from simple whipsaws, to circular saws, and eventually band saws. Each of these steps represented the ability of companies to cut at a higher speed and with less waste. While sawmilling is described in more detail in Chapter 4, it is important to note that sawmills also increased capacity and sophistication alongside logging operations' increased yield.

⁴⁵ Ralph Clement Bryant, *Lumber: Its Manufacture and Distribution* (New York: John Wiley & Sons, 1922), xvii.

III. Land and Markets

The technology and labor in the production process was not the only element that allowed lumber to be cut from the forests of Minnesota and Louisiana on an increasing scale and with greater mobility. Institutions, laws, and ideology related to land ownership and use shaped the lumber industry's development and capacity for mobility from its origins in Maine, Pennsylvania, and New York, to the Lake States and the South. The agrarian republican tradition in the United States bequeathed to the lawmakers of the young nation the notion that the immense public domain held by either the federal or state governments should be disposed of cheaply and quickly, so as to continue the clearing of land for agriculture (and a yeoman led republican society). Yet, as noted legal historian James Willard Hurst has written though, "The northern parts of the Lake States presented the first challenge to the presumption that agriculture was the normal destiny of the public domain. ... [P]olicy derived from the disposal of lands primarily valuable for agriculture dominated the disposition of lands that were in fact primarily valuable for timber."⁴⁶ Basically, across the Great Lakes states during the middle third of the nineteenth-century, federal and state land – ultimately beyond the northern limit of practical agriculture – was transferred quickly and in fee simple (absolute ownership) to individuals, canal and railroad corporations, river improvement companies, and lumber

⁴⁶ James Willard Hurst, *Law and Economic Growth: The Legal History of the Lumber Industry in Wisconsin, 1836-1915* (Madison: University of Wisconsin Press, 1984 [orig. 1964]), 13. Hurst argued that law and politics shaped the development of the lumber industry (and markets) through public land policy, contract law, police power, and planning, offering an interpretation followed here which emphasizes the study of markets as social and political constructions. Hurst was a pioneer in documenting American state power at a time when major currents in American political and economic thought of the American state as an "oxymoron," to use William J. Novak's characterization. See his "The Myth of the 'Weak' American State," *American Historical Review* 113 (2008): 752-772; and "Law, Capitalism, and the Liberal State: The Historical Sociology of James Willard Hurst," *Law and History Review* 18, no. 1 (2000): 97-145. On the relationship of law, economics, and environment in another extractive industry following in the Hurstian tradition, see Paul Sabin, *Crude Politics: The California Oil Market, 1900-1940* (Berkeley: University of California Press, 2005).

companies for low prices and in ways that did not preclude the accumulation of large amounts of land in “particular hands.”⁴⁷ Mexican-American War Land Warrants distributed to veterans as payment for service, the Homestead Act of 1862, and perhaps most crucially, the generous terms of railroad land grants made these accumulations possible. A similar process occurred in the final decades of the century in the forests of the South, where lumber firms bought large swaths of land, paid for in part by the profits generated in the Great Lakes lumber industry. The Southern Homestead Act, passed in Congress in the year following the end of the Civil War, had restricted land entries to 80 acres and ended cash sales, with the hope that it would stimulate settlement on public land by poor whites, freed slaves, and immigrants. As Reconstruction wound down in the 1870s, southern legislators called for this act’s repeal so that northern lumber, mining, and other industrial enterprises could take advantage of the South’s potential resources. After 1880, land in the Gulf States was opened for unrestricted sale. Between 1880 and 1888, 83 percent of the more than 1.6 million acres sold in Louisiana in blocks of 5,000 acres or more went to northern buyers, many from declining lumber regions.⁴⁸ Ultimately, the result of this disposal was that by the early twentieth century, massive amounts of the nation’s remaining timber lay in concentrated private ownership.

The status of the nation’s timberlands became a central part of the massive three-volume report shedding light on “monopolistic” aspects of the industry’s operation undertaken by the U.S. Bureau of Corporations and published in 1913 and 1914. As

⁴⁷ Hurst, *Law and Economic Growth*, 19. See his Part 1, Chapter 1 on “General Public Lands Policy” for a wonderful overview of land policies in the U.S. during the nineteenth century. Also, for the way the process developed in Minnesota and the role of assignable military land warrants in disposing the public domain of the St. Croix valley, in particular, see Larson, *The White Pine Industry in Minnesota*, 53-70.

⁴⁸ Williams, *Americans and Their Forests*, 238-244. See also Paul Gates, *History of Public Land Law Development* (Washington, D.C.: Government Printing Office, 1968).

lumber prices rose in 1906 and 1907 and rumors of a “lumber trust” circulated in the press, Congress directed the Department of Commerce and Labor to investigate the lumber industry’s practices and the cause of high prices. In contrast to other industries, where “there are many great combinations” as a result of the federal government’s benign neglect, in lumber the Bureau found “now in the making a combination caused, fundamentally, by a long standing public policy,” namely federal land policy.⁴⁹

Essentially, whereas in other manufacturing industries combinations arose out of inattention by federal policy makers, in the lumber industry the Bureau pointed out that the disposal of the public domain had played a central role. Specifically, in the South the Bureau discovered that the largest 67 holders of timberlands held 24 percent of the total stock. When focused on the more valuable longleaf yellow pine only, however, those 67 owners held 39 percent.⁵⁰ In the Lake States, where the lumber industry’s production had already peaked and the amount of standing timber was much smaller, the report showed that 6 holders held 54 percent of the remaining white and Norway pine in Minnesota. The largest 32 holders, meanwhile, owned 77 percent of what remained of these species in the state.⁵¹ The Bureau found that the highest levels of concentration in timber landownership lay in the Pacific Northwest, where the Southern Pacific Company, the Weyerhaeuser Timber Company, and the North Pacific Railroad held 11 percent of all privately owned timber in the United States.⁵² Though this dissertation does not deal directly with the Pacific Northwest region, it is important to note that the Weyerhaeuser

⁴⁹ U.S. Bureau of Corporations, *The Lumber Industry*, vol. 1 (Washington: Government Printing Office, 1913), xxii. Due to the extent of overlapping directorates and the uncooperative behavior of lumber firms with the Bureau, determining the extent of concentration in landholdings proved challenging. The Bureau believed their conclusions represented a low-bar for concentration and may well have been higher. See *Ibid.*, 13-14.

⁵⁰ *Ibid.*, 21.

⁵¹ *Ibid.*, 22.

⁵² *Ibid.*, 15.

Timber Company, which owned 95.7 billion board feet of standing timber in Oregon and Washington at the time of the Bureau's report, was formed out of capital generated through Weyerhaeuser firms in Minnesota and Wisconsin during the preceding decades.

In contrast to other industries, like steel, where the size of the mill or factory was the critical juncture for creating oligopolistic or monopolistic control over an industrial sector through economies of scale, in the lumber industry mill size was not the most important feature for the enlargement of the industry. In 1913, the largest sawmill in the United States cut only 0.5 percent of the total annual output. As the Bureau of Corporations explained, because lumber has such a low value in relation to its bulk and weight, it is most advantageous to keep transportation costs low by keeping the distance between forest and the mill low.⁵³ To be sure, the largest timber holders tended to have larger and better capitalized mills, but they would be spread out to keep transportation costs low and perhaps even divided up into separate manufacturing enterprises. The dispersal of mills also contributed to the "cut and run" mentality of the industry.

Behind the concern of the Bureau of Corporations over concentration in forest ownership was the central question of the Progressive Era: what power should corporations have in the economy? Should "trusts" and "monopolies" have the power to be price makers in the market, instead of the price takers envisioned by the "perfect competition" of Adam Smith and David Ricardo's classical political economy? The Bureau's report made clear their apprehension on this front: "Such concentration in standing timber, if permitted to continue and increase, makes probable a final central control of the whole lumber industry. A few strong interests, ultimately holding the bulk

⁵³ U.S. Bureau of Corporations, *The Lumber Industry*, 3.

of the timber, can set the price of timber and its products.”⁵⁴ Ironically, lumber capitalists would have likely agreed in word, if not spirit, with the Bureau’s suggestion that they sought to set the price of lumber. As a solution for chronically low prices, lumbermen, through trade association mechanisms actively sought out to collude over prices (with limited success) for most of the late nineteenth and early twentieth centuries.

Between 1890 and 1916, the U.S. economy reoriented itself so that the foundation of industrial enterprises no longer sat with individual proprietors and in competitive markets, but shifted towards corporate organization and administered markets. The corporate form taken by large railroads during the Gilded Age heralded this shift in political economic organization. The capital requirements, managerial necessities, and market power of railroad companies and other industrial firms outstripped all previous American enterprises and raised legal and social questions about the power of individual firms that seemed to go against important republican concerns for economic independence and equability.⁵⁵ During the 1870s and 1880s, this “corporate reconstruction of American capitalism,” as historian Martin J. Sklar has called this transformation, represented a clear shift in the size and scale of industrial enterprises, and also it suggested a series of questions about the limits of corporate power, state power, and about American social relations of the kind later raised by the Bureau of Corporations. “Trusts,” then, became the focus of American political debate between the passage of the Sherman Anti-Trust Act in 1890 and the Federal Trade Commission Act and Clayton Anti-Trust Act in 1914. As courts struggled to define the meaning of the first

⁵⁴ U.S. Bureau of Corporations, *The Lumber Industry*, xxi.

⁵⁵ The classic statement on internal changes in business operations during the Gilded Age and Progressive Era is Alfred D. Chandler, Jr., *The Visible Hand: The Managerial Revolution in American Business* (Cambridge: Harvard University Press, 1977).

act, it became gradually clear by 1911 (and confirmed in 1914) that on the issue of “restraint of trade” upon which these decisions turned, “bigness” itself did not constitute a crime, but instead attempting to prevent others from entering an industry, driving them out of business, or overtly fixing prices was legally problematic.⁵⁶ Though initially anti-trust laws seemed to attack the power of large corporations, in fact it confirmed the power of corporations to administer markets within certain bounds.

The lumber industry thus sat in the middle of the debates about the nature and future of American capitalism. In the post-Civil War period, lumber firms in the Great Lakes region and in the South began organizing on the corporate model. Also during this period the capital intensity of the firms also increased. They owned large tracts of land, organized joint river improvement companies, and eventually began using the railroads for logging. Further, while exceedingly large mills might not be conducive for exercising monopoly power, owning a number of them could be. As part of this, and alongside concentration in landownership, seemingly distinct lumber firms in Minnesota and Louisiana’s industry were in reality often directed through a series of interlocking and overlapping sets of managers and owners. This would not only make them rich, but also bring order to markets and make efficient use of resources. In Minnesota, Frederick Weyerhaeuser and his family perfected this strategy. Born in Germany in 1834, Weyerhaeuser emigrated to the U.S. in 1852 at the age of 18. With his partner and brother-in-law Frederick C.A. Denkmann, Weyerhaeuser began running a sawmill at Rock Island, Illinois in 1860. By the 1870s, as that mill prospered, Weyerhaeuser joined or formed partnerships with many other mill owners. In the period 1900-1914,

⁵⁶ Martin J. Sklar, *The Corporate Reconstruction of American Capitalism, 1890-1916: The Market, the Law and Politics* (Cambridge: Cambridge University Press, 1988), 86-175; and James Weinstein, *The Corporate Ideal in the Liberal State: 1900-1918* (Boston: Beacon Press, 1968).

Weyerhaeuser (and his sons) consolidated power over much of the lumber industry of the Lake States, owning an (often controlling) interest in 24 logging and lumber firms.⁵⁷ In 1906, just five of Weyerhaeuser's larger lumber companies in the northern part of Minnesota produced 383 million board feet of lumber, or 21 percent of Minnesota's total lumber production for that year.⁵⁸ When Frederick Weyerhaeuser died in 1914, the *New York Times* reported in his obituary that the "great 'Weyerhaeuser Syndicate,' reputed to have almost a hundred partners, none of whom knew the business of the others."⁵⁹ The ability of the Weyerhaeuser family to gain ownership in increasingly large lumber enterprises is indicative of the concentration of wealth and ownership taking place as the corporate form of capitalism blossomed during the closing decades of the nineteenth-century. Yet the fact that each of these companies (despite significant overlaps in ownership) remained relatively uncoordinated in the production or marketing of their products points to the ways in which the competitive-proprietary form of capitalism still guided the ideologies of the owners and the structure of the enterprises. David Bartlett, starting in 1910 a salesman for the Weyerhaeuser affiliated Northern Lumber Company in Iowa, recalled later, "Our most serious competition was from members of our own group."⁶⁰ The Weyerhaeuser Sales Company, managing sales and distribution for all Weyerhaeuser affiliated firms, did not form until 1916.

This process of overlapping ownership and quasi-autonomous production was not

⁵⁷ Ralph W. Hidy, Frank Ernest Hill, and Allan Nevins, *Timber and Men: The Weyerhaeuser Story* (New York: Macmillan, 1963), 588-589. This list does not include many directly owned subsidiaries of each of these firms. Many of the firms discussed in this dissertation were Weyerhaeuser-related companies.

⁵⁸ Hidy, Hill, and Nevins, *Timber and Men*, 590.

⁵⁹ "F. Weyerhaeuser, Lumber King, Dead," *New York Times*, April 5, 1914. On the coalescence of the bourgeoisie as a social formation, see Sven Beckert, *The Monied Metropolis: New York City and the Consolidation of the American Bourgeoisie, 1850-1896* (Cambridge: Cambridge University Press, 2001).

⁶⁰ David H. Bartlett, interviewed by Wendell Link, 1953, Weyerhaeuser Timber Company Oral History Collection, Oral History Research Office, Columbia University, 4.

unique to Minnesota's lumber industry. In addition to a few Weyerhaeuser companies operating in Arkansas and Louisiana, other combinations existed as well. The Louisiana Central Lumber Company with mills at Clarks and Standard, Louisiana, for example, was tied through ownership and management to at least four other lumber firms producing in the state: the Louisiana Long Leaf Lumber Company, the Forest Lumber Company, the Louisiana Sawmill Company, the White-Grandin Lumber Company. J.B. White and a small group of other men serving as vice presidents, treasurers or general managers in at least two firms controlled all these enterprises from Kansas City, Missouri. The group also owned stakes in at least three short line railroad companies in Louisiana for hauling logs. It was also from Kansas City that White directed the Missouri Lumber and Land Exchange and marketed the lumber produced in the Louisiana mills.⁶¹

As firms' size and relatively uncoordinated output increased, low prices became a constant problem for producers during the late nineteenth and early twentieth centuries. Looking back from the temporarily high prices that the lumber industry enjoyed at the end of World War I (thanks to war procurement), Yale Forestry professor Ralph Clement Bryant described lumber prices during the late 1800s and early 1900s as having "displayed fluctuating tendencies, short periods of high prices being followed by comparably long periods of low prices during which the returns to the industry were either low or negligible."⁶² Low prices returned shortly after Bryant's article was published as a result of slackening demand. In part because of high capital costs, firms had

⁶¹ Based on 1919 letterheads and correspondence appearing in the records of the Louisiana Central Lumber Company's records.

⁶² R.C. Bryant, "Lumber Prices," *Annals of the American Academy of Political and Social Science* 89 (May 1920): 79. On the variability of lumber prices during the nineteenth and early twentieth century, see also Wilson Compton, "The Price Problem in the Lumber Industry," *The American Economic Review* 7, no. 3 (1917): 582-597. Compton was the secretary of the National Lumber Manufacturers Association from 1918 until 1944.

incentives to cut, mill, and sell as much lumber as possible in order cover their fixed costs, wage bills, and taxes. Though this strategy remained rational for the firm, for the industry it proved ruinous. Overproduction plagued the industry throughout the period under study. As former chief forester William Greeley recalled: “Its large capitalization forced not only maximum production, but constant production. Big sawmills and overhead organizations and obligations to capital could ill endure idleness.” This reality, he continued, resulted in frequent “periods of overproduction and intense competition. ... Magnificent virgin timber was too often forced upon sluggish customers at less than the cost of production. It was less costly to manufacture at a loss than not to manufacture at all.”⁶³

From 1865 through the turn of the century, overall and per capita consumption of lumber rose – peaking at 82 cubic feet per person in 1906 – but after 1906 declining per capita consumption and total consumption added to the industry’s problem with low prices. Gradual introduction of alternative industrial materials – steel, aluminum, concrete, and (eventually) plastics – reduced markets for lumber. By 1920, lumber consumption fell to 50 cubic feet per person, and in by the 1970s, it approached 30 feet per person. Decline in the use of other wood products was even more dramatic. The use of fuel wood fell as gas, coal, oil, and electric heating replaced wood in residential and industrial heating and power production. In 1900, Americans consumed 60 cubic feet per person of wood fuel, while by the 1920s, it was under 30 cubic feet. In 1970, wood fuel consumption per capita fell to under 5 cubic feet.⁶⁴ The decline in both per capita consumption and overall production exacerbated the problem of low prices and high

⁶³ Greeley, *Forests and Men*, 41-42.

⁶⁴ Williams, *Americans and Their Forests*, 487-488.

capacity in the industry.

The main way lumber firms attempted to deal with this problem was through the establishment of regional and national trade associations. Though trade associations served a variety of purposes (and were especially successful in shaping the types of forestry legislation passed in the U.S. Congress, as will be explained below), they also sought to fight the problem of chronically low prices. Associations did this primarily through the establishment of price lists. The Mississippi Valley Lumbermen's Association (MVLA) formed in September 1891, with active participation from members of Weyerhaeuser related operations, for the express purpose of establishing "more nearly uniform prices."⁶⁵ Though the organization was indicted (and unsuccessfully prosecuted) almost immediately for price fixing in violation of the Sherman Anti-Trust Act, the Minnesota lumbermen used the price list in fits and starts through the early 1900s in an attempt to keep prices up.⁶⁶ In January 1899, for example, J.E. Rhodes, secretary of the MVLA wrote to the membership explaining, "The maintenance of the new price list is assured from the very favorable circumstances under which it goes into effect." Not only did the organization forecast that demand for lumber would rise during the year, but the MVLA also published the names of the firms who conformed to the pricelist. Rhodes declared, "By organization and co-operation the manufacturers of White Pine lumber have reached a point where there is some little profit in the business, and if they do not take advantage of the present opportunity no one is responsible but themselves."⁶⁷

⁶⁵ Hidy, Hill, and Nevins, *Timber and Men*, 175.

⁶⁶ The 1892 case against the MVLA was dismissed because under early judicial readings of the Sherman Act companies' collusion to raise prices without coercing others to join them meant they had not restricted trade. See Sklar, *The Corporate Reconstruction of American Capitalism*, 118.

⁶⁷ J.E. Rhodes, circular no. 106 to members of the MVLA, January 13, 1899, Box 99, Laird, Norton records.

Members would know who did not participate, but there was little that could be done besides chiding these businesses to conform.

Though aware of the increasing critical gaze of the federal and state governments, the MVLA continued to circulate pricelists. In 1899, even as the Minnesota legislature contemplated and then passed an anti-trust law, Rhodes wrote to the membership telling them there was nothing to worry about:

It appears that from what has been said and published during the past week, the impression generally prevails that the law known as the “anti-trust” law, recently passed by the legislature by the State of Minnesota, renders the price list agreement of January 1st, 1899, illegal and void. The Board of Directors of this Association took up the matter and has obtained legal opinion to the effect that the law in question does not affect the said price list agreement in any respect.”⁶⁸

In 1906, though, as lumber prices climbed and Congress appointed the Department of Commerce and Labor (resulting in the Bureau of Corporations’ report) to investigate the industry, regional lumber manufacturers’ associations across the country not so subtly began issuing “market reports” containing the same information as price lists. In Minnesota, the Northern Pine Manufacturers Association (NPMA), formed in 1906 from the merger of the MVLA and the Wisconsin Valley Lumbermen’s Association, did just that.⁶⁹

The development of trade associations in the southern lumber industry occurred around the same time as in the Lake States, not least because many operators in the north

⁶⁸ J.E. Rhodes, to membership of MVLA, April 26, 1899, Box 99, L,N papers. MNHS. The act to which he referred was “An act to prevent the organization of trusts...,” (April 21, 1899), Chapter 359. This statute was the basis through which the Governor Van Sant initially argued against the merger of the Great Northern, the Northern Pacific, and the Chicago, Burlington and Quincy railroads, though the case eventually was taken through federal courts. See Carl H. Chrislock, *The Progressive Era in Minnesota, 1899-1918* (St. Paul: Minnesota Historical Society, 1971), 14-18.

⁶⁹ William G. Robbins, *Lumberjacks and Legislators: Political Economy of the U.S. Lumber Industry, 1890-1941* (College Station, Tex.: Texas A&M Press, 1982), 47-48. Though receiving little of the outrage directed at price fixing during the Progressive Era, the NPMA also circulated lists showing the wages different firms paid, suggesting “wage fixing” was also underway. See “Pine Mill Wages,” March 21, 1908, Box 1, Northern Pine Manufacturers Association papers (P1057), Minnesota Historical Society.

also established plants in the South. J.E. Rhodes, secretary and stenographer to Frederick Weyerhaeuser and eventual secretary for the MVLA-NPMA, for example, also became the secretary of the Southern Pine Association (SPA). The first major trade associations of southern producers were organized with the same purpose as the MVLA-NPMA: advancing prices. A few lumber manufacturers' organizations sprouted up in the South during the 1880s, but the first regional organization was the Southern Lumber Manufacturers Association (SLMA). In part to distract from the anti-trust criticisms, in 1906, the SLMA changed its name to the Yellow Pine Manufacturers Association (YPMA). This name change did not apparently fool the state of Missouri. In 1908, it brought an indictment against 41 southern lumber producers chartered in the state, all members of the YPMA, for colluding to fix prices in the lumber industry. The price lists advanced by the YPMA were among the mountains of evidence presented by the state to show this offense. Though the YPMA was not named in the suit, by the time this case was settled in 1914, the destruction of the organization was basically assured, since all of the convicted firms were legally required to withdraw from the YPMA or any organization like it. Lumber producers formed the Southern Pine Association (SPA) to take the place of the YPMA the same year, avoiding some of the YPMA's legal problems by establishing individual lumber firms as "subscribers" instead of "members" to its organization.⁷⁰

After the essential cartelization of the industry (and others) allowed by the justice department during the First World War, lumber barons entered the 1920s with hope that

⁷⁰ James E. Fickle, *The New South and the "New Competition:" Trade Association Development in the Southern Pine Industry* (Urbana: University of Illinois Press, 1980), 14-18, 40-50. For a good overview of trade associations and anti-trust law in the lumber industry, see Lee M. James, "Restrictive Agreements and Practices in the Lumber Industry, 1880-1939," *Southern Economic Journal* 13, no. 2 (1946): 115-125.

the problems of overproduction and low prices would be solved through continued use of the trade association mechanism. During that decade, and with enthusiastic cooperation from Commerce Secretary Herbert Hoover, the industry established standardized lumber grades and thanks to relaxed anti-trust prosecutions emanating from the Harding and Coolidge Departments of Justice they freely circulated price and production statistics. The Commerce Department even began publishing some monthly lumber statistics. Despite these “successes” for the industry, the structural problems of overproduction persisted, which was accentuated as lumber consumption declined.⁷¹ Ultimately, the increased concentration and capital intensity that defined logging and lumber production, and supposedly increased cooperation between firms, did not solve but troublingly continued to face what lumber mill owners considered (with at least a grain of truth) to be ruinously low prices. Price fixing offered temporary solutions, but the number of firms in the industry as well as its geographically mobile nature made continuing any of these agreements for any length of time difficult. Market capitalism, after all remained a competitive system, and firms continued to cut lumber to meet their own needs. Ironically, after being pursued at various moments by federal and state government anti-trust proceedings, under the National Recovery Administration, regional lumber trade associations were called on to set price floors for the industry as part of the Lumber Code Authority. The NPMA, which had even dissolved as an organization because so few pine producers remained in the Lake States region, restarted itself under the NRA. The Lumber Code used state power to back up the cooperative measures of the 1920s, but also ultimately failed. Still, if the lumber trade associations had trouble keeping price high and output restricted, their ability to influence federal and state forestry policy was

⁷¹ Robbins, *Lumberjacks and Legislators*, 75-89.

to be envied.

III. Forestry and the Lumber Industry

In 1864, as the lumber industry in the Great Lakes was heating up, George Perkins Marsh published his pioneering ecological text, *Man and Nature*. In this wide ranging study, drawn partially from his experience with forest ecosystems earned while operating a sawmill in Vermont, Marsh saw how logging could be responsible for a variety of environmental ills, including more frequent flash floods, silted streams, and erosion. As insightfully, given the context of the massive privatization of public land underway at that moment, Marsh offered an argument for what it would take to reverse this “forest destruction.” He cited the deforestation of Europe and suggested that this “abundant experience has shown that no legislation can secure the permanence of the forest in private hands.”⁷² Marsh’s understanding of the incentives of private owners to cut the trees and leave the land deforested had an important impact on discussions taking place in New York State during the 1870s, which ultimately, if slowly, led to the creation and expansion of the Adirondack Forest Preserve during the 1880s and 1890s. Though Marsh’s sense of ecology and his then novel argument for state ownership of forestland made him unique, he was a voice among many in worrying about a coming lumber shortage, or “timber famine” in the U.S. In Pennsylvania, for instance, the fledgling Bureau of Statistics reported:

Originally the whole of our State was one vast forest, aptly described in the royal charter to William Penn as *Penn’s woods*. A little less than two centuries has so

⁷² George Perkins Marsh, *Man and Nature; Or, Physical Geography as Modified by Human Action* (New York: Scribner, 1864), 292. On Marsh and New York State, see Karl Jacoby, *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (Berkeley: University of California Press, 2001), 11-28.

greatly changed the aspect of things that we are now told that twenty years more will leave our productive forests exhausted, and Penn's woods must cease to even afford timber to furnish supplies for domestic consumption."⁷³

This sentiment was echoed across the country as rudimentary projections of both a growing population and lumber consumption showed that forests would shortly be unable to meet demand. These projections proved inaccurate on a national level, but states like Pennsylvania did begin importing lumber.

The forestry movement emerged as a response to the clear cutting of the Great Lakes forests and public concern for a coming "timber famine" during the late nineteenth century. The country's first cohort of trained foresters studied in Europe where intensive forest management was already being practiced. The Chief of the U.S. Department of Agriculture's Division of Forestry from 1886-1898, Bernhard Fernow, was a German forester before emigrating to the U.S., and his successor, Gifford Pinchot, studied forestry at the L'Ecole Nationale Forestière in Nancy, France.⁷⁴ Forests, these experts argued, should not be left to their own devices (or to the market), but rather should be managed by professionals. As the lumber industry sought to use trade associations to create more rationally administered markets in place of competitive ones as a way to control prices and output, the forestry movement (often with the support of the industry) sought to bring the same "rationality" to the administration of nature. Both the development of corporate capitalism and sciences like forestry were invested in progressive era ideas about efficiency.⁷⁵ Thus, the forestry movement was inherently conservationist, in that it argued

⁷³ *Second Annual Report of the Bureau of Statistics of Pennsylvania for the years 1873-74*, 158.

⁷⁴ Harold K. Steen, *The U.S. Forest Service: A History* (Seattle: University of Washington Press, 1976), 24, 48.

⁷⁵ Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Cambridge: Harvard University Press, 1959). Hays explored not only how conservationists imagined and projected a rational, utilitarian view of natural resources, but also how this fit into centralizing political tendencies in the Progressive Era.

for an efficient and utilitarian use of the environment. In what is likely Gifford Pinchot's most enduring public statement, in 1905, he wrote that the purpose of the Forest Service was to manage the nation's forests "from the standpoint of the greatest good of the greatest number in the long run."⁷⁶ Pinchot and the Forest Service viewed forests as a resource to be grown and harvested on a continual basis, with the goal of a "sustained yield" where alternating managed reforestation and logging efforts would maintain both supplies of lumber and industrial communities.⁷⁷ Such an ideology stood in stark contrast to the practices of the lumber industry during this period, yet foresters were much more adept at articulating this technical goal than accurately describing the social and political institutions that would encourage such a system instead of a continuation of "cut and run" practices.

President Benjamin Harrison created the first national "forest reserves" in 1891, as authorized under the Forest Reserve Act of that year. Though their origin lay in concerns over timber supply, the act did not specify a function for the reserved land, provide administration, or explain the conditions under which timber could be sold. Over the next fifteen years, many of these ambiguities were cleared up, and in 1905 the newly renamed U.S. Forest Service (still in the Department of Agriculture) was granted administration over all 63 million acres of forest reserves (two years later renamed National Forests). Increasing employment in the Forest Service bureaucracy accompanied this increase in acreage: in 1898 just 11 people worked for the Bureau of Forestry, but in 1905 the Forest Service employed 821.⁷⁸ As the ranks of the Forest Service expanded,

⁷⁶ Gifford Pinchot, qtd. in Steen, *The U.S. Forest Service*, 75.

⁷⁷ Recreation has had a major back seat in Forest Service policy, for instance.

⁷⁸ William G. Robbins, *American Forestry: A History of National, State, and Private Cooperation* (Lincoln: University of Nebraska Press, 1985), 12.

American universities began to offer degrees to educate future foresters. Yale's Forest School opened in 1900 after Pinchot's family made a sizable donation to the University.⁷⁹ The Forest Service's privileged position in both financial resources and political reach made it the main institution of the American forestry movement, allowing it to practice forestry by example to, in Pinchot's words, "[S]how [lumber] firms that forestry will pay."⁸⁰

Despite the growth of the forestry movement and its main institution, the U.S. Forest Service, during the first four decades of the twentieth century there was much more talk about the need for intensive forestry – from lumber companies, state and federal legislatures, and conservationists – than was ever actually practiced in Minnesota, Louisiana, or any other important lumber region. As will be shown in Chapter 5, the vast majority of deforested land in both states became known as the cutover, a space where farmers tried to eke a living out of this marginal land, or more likely remained abandoned and littered with stumps and shrubs. Pinchot's hope that the Forest Service could demonstrate that "forestry will pay," could not compete with industry's competitive structure, rapacious production process, or the privatizing impulse in federal land policy. Instead of investing in reforestation, institutional forces pushed the industry to deindustrialize and encouraged private settlement on cutover lands.

Groups in both Minnesota and Louisiana called for intensive forestry, but these reform organizations could not buck the institutions defining the industry's political economy and geography. Minnesota formed the first state Forestry Association in 1876, though initially its primary activities seemed to have been focused on encouraging the

⁷⁹ David F. Noble, *America By Design: Science, Technology, and the Rise of Corporate Capitalism* (New York: Oxford University Press, 1977).

⁸⁰ Gifford Pinchot, qtd. in Robbins, *American Forestry*, 25.

planting of trees on the prairie lands in the southern and western parts of the state. Still, by the early 1880s the Minnesota Forestry Association (MNFA) turned its gaze to the northern pine forests, unsuccessfully arguing that the increasing cutover acreage left by the industry should be reforested.⁸¹ In Louisiana, the state Forestry Association, headed by lumber mill owner Henry Hardtner, also encouraged reforestation, but aside from efforts on Hardtner's own land, few others followed. Furthermore, as historian William G. Robbins points out, "Both in the Great Lakes region and in the South most of the state legislatures established forestry agencies after the peak years of harvesting."⁸² True enough: Minnesota established a state forest service in 1911 and Louisiana in 1917, in both cases after the industry had been operating in these states for decades. Louisiana, meanwhile, did not have any state forests before 1923. The U.S. Forest Service also had a very limited presence in both Minnesota and Louisiana during the peak years of cutting. All of the initial forest reserves had been in western states, and Minnesota was granted its two national forests in 1908 (Minnesota National Forest⁸³) and 1909 (Superior National Forest), respectively, while Kisatchie National Forest in Louisiana was not created until 1930. Most cutting and forest practices existed entirely outside the movement and with little or no state supervision.

What, then, was the influence of forestry and U.S. Forest Service on the lumber industry before the New Deal? First, and most crucially, federal and state governments, working through the state forestry agencies and the U.S. Forest Service offered subsidies for fire protection to the industry. Second, the establishment and expansion of the

⁸¹ Minnesota Forestry Association papers (P2549), Minnesota Historical Society. Also see Newell R. Searle, "Minnesota State Forestry Association: Seed Bed of Forest Conservation," *Minnesota History* 44, no. 1 (1974): 16-29.

⁸² Robbins, *American Forestry*, 38.

⁸³ Minnesota National Forest was renamed Chippewa National Forest in 1928.

National Forests kept timbered forestlands out of the reach of lumber firms, theoretically helping to keep the price of lumber up, while the purchase of cutover lands for incorporation into National Forests relieved companies of this denuded land while the state paid for its reforestation.⁸⁴ Third, as is explored in the next chapter, forestry schools institutionalized and professionalized knowledge about forest environments previously held by artisans, providing more “authoritative” evaluations of the quantity and quality of “merchantable timber” on company land, and trained the next generation of foresters. More broadly, the research stations operated by the Forest Service and forestry schools provided free research and development on applications for wood products and methods of timber harvesting. The Forest Service also operated tree nurseries. Each of these activities in the long run subsidized the industry. Finally, the state was significant for what it did not do during these years: regulate logging and reforestation practices on private land. Essentially, from the outset, the industry maintained hegemony over forestry and the Forest Service in the United States, with the latter subsidizing the industry in two critical ways.⁸⁵

By the end of the 1920s, despite the cooperative efforts to fight fires and the Forest Service’s purchase and reforestation of some lands, the reality was that the forestry movement had failed to encourage lumber firms to voluntarily reforest land and cut their lands on a “sustained yield” basis. Marsh’s fear in 1864 that reforestation without state

⁸⁴ The percentage of the nation’s lumber supply coming from the National Forests before WWII was very small. In 1907, for example, timber sales from the National Forests represented just two percent of total production that year. See Steen, *The U.S. Forest Service*, 90, 224.

⁸⁵ This argument has been most fully developed in Robbins, *Lumberjacks and Legislators*. Robbins points to the debates leading up to the passage of the Clarke-McNary Act of 1924 as a high water mark in the power of the industry in setting forest policy. That act increased funds available for cooperative fire protection with state forestry agencies and also released funds for further purchase of national forest land. Meanwhile, the industry was able to ward off demands from some progressive conservationists, including Gifford Pinchot, that any new forestry legislation contain language providing for the regulation of logging.

ownership was unlikely proved accurate in the U.S. through the 1920s. Modern day environmentalists have played on the enduring perception of the Forest Service as “captured” by big business by altering the National Forest signs reading “Land of Many Uses,” making them read “Land of Many Abuses.” In the late 1920s, however, National Forests were likely the best-managed lands in the country, relative to the way private lands were being handled. A group of foresters, however, recognized the role of forestry in legitimizing the “many abuses” taking place on private land. The 1930s challenged the power of the industry over forest policy as New Deal planners put forward alternative visions for the nation’s forests and cutover lands.

On February 7, 1930, seven foresters, most working for the U.S. Forest Service, distributed an open letter to their colleagues, the membership of the Society of American Foresters (SAF). The foresters began by establishing their concerns for efficiency in the forests: “The destruction of the forests of America has been a long-drawn out tragedy of waste. Now we face the danger of a moral tragedy also: that the foresters of America will accept that destruction and by silence condone it.” More radically, the foresters attacked the conventional wisdom of the profession: “Some of us are lured by the illusion that forest owners will voluntarily end forest devastation in spite of the overwhelming evidence, after a half century of public protest, that the progress in this direction is almost negligible. Some of us are lulled to inaction by a lack of faith in the possibility of remedying the evil.” Critiquing the elaborate system of fire protection established across the lumber producing regions, they continued: “To what end a vast system of fire control if the forests it protects are to be destroyed by the axe?” The solution to this deplorable state of affairs, the authors told their colleagues, lay “along two main lines: public

measures to prevent forest devastation and a greatly increased program of public forests.”⁸⁶

The authors were not lightweights. Among the signatories were Gifford Pinchot, the first Forester of the U.S. Forest Service and the once and future governor of Pennsylvania; Raphael Zon, the director of the Forest Service’s Lake States Forest Experiment Station; and Robert Marshall, a Bureau of Indian Affairs forester and future co-founder of the Wilderness Society. They were all progressives, except for Marshall, who was a socialist and the author of a book published later in the 1930s called *The People’s Forests*.⁸⁷ The letter caused a stir in the SAF, where many leading foresters had become comfortable cooperating with industry and enthusiastically believed that private owners would change their practices. Herman Haupt Chapman, a prominent Yale Forestry School professor, replied to the letter by saying that though he favored expanding the National Forests as the “keystone in the arch of forestry in this country,” when it came to dealing with private lands he argued, “In thirty years I have failed to discover any really effective plans by which private devastation could be stopped by the passage of laws, except as economic conditions and public cooperation combined to secure fire protection and tax reform.”⁸⁸ In other words, gradual additions to National Forests should continue and the tax structure on timberlands should be altered to encourage private reforestation. The immediate impact of the letter on the SAF and

⁸⁶ George P. Ahern, Robert Marshall, E.N. Munns, Gifford Pinchot, Ward Shepard, W.N. Spearhawk, and Raphael Zon, “A Letter to Foresters,” February 7, 1930, Box 73, Society of American Foresters papers, Forest History Society (Durham, N.C.).

⁸⁷ In a letter in 1931 Marshall told prominent forester Herman Haupt Chapman (one imagines much to the latter’s dismay), “We should press the campaign for socialization of the forests, and I would add, for socialization of all natural resources, public utilities, transportation facilities, and especially banks.” Robert Marshall, letter to Herman Haupt Chapman, February 8, 1931, Box 26, vol. 64, Herman Haupt Chapman papers, Sterling Memorial Library, Yale University (hereafter Chapman papers).

⁸⁸ “Statement of H.H. Chapman on Proposed Forest Policy by Gifford Pinchot and Major Ahern, 1930,” Box 26, vol. 64, Chapman papers.

forestry might have been limited, except that as the depression worsened, ideas about public ownership and planning in all aspects of American life, including in forest policy, became increasingly mainstream. Raphael Zon, on the eve of the 1932 election, captured how the fortunes of his brand of forestry were about to change when he asked fellow 1930 letter signer, George P. Ahern: “Question: What is the most important letter in the alphabet? Answer: R, because it is the end of Hoover and the beginning of Roosevelt.”⁸⁹

The New Deal represented the most serious challenge to the lumber industry’s power over forest policy, as politicians, foresters, and planners seriously debated regulating logging on private land, and even nationalizing forest land. More broadly, the ethos of the New Deal encouraged critical examinations of all natural resource use and included experimentations with regional planning, most evident in the Tennessee Valley Authority, and at the heart of the work of the National Resources Planning Board. More concretely, as explored in Chapter 5, as a result of the “cut and run” practices of the industry, millions of acres of tax delinquent cutover land returned to the public domain, forcing the hand of the state and federal government. By the eve of World War II, the Forest Service had presented a plan that called for the regulation of cutting on all private lands and the enlargement of national forests. World War II, however, came as a *deus ex machina*, pushing aside these ambitious plans. Though these efforts failed, the return of millions of cutover acres in Minnesota and Louisiana to public ownership drastically altered the future of these regions during the postwar period.

IV. Conclusion

Between the end of the Civil War and World War II, the lumber industry in the

⁸⁹ Raphael Zon, letter to George Ahern, October 19, 1932, Box 8, Raphael Zon papers (P1237), MNHS.

United States behaved as a “great nomad,” shifting its centers of production away from the Great Lakes region and into the South and Pacific Northwest. Industrial production technologies, the development of the corporate form of capitalism, and federal land and forestry policy shaped this trajectory of the industry over this period, giving the industry its “nomadic” form. As the industry moved onto new tracts of land, however, it required a mechanism for evaluating and valuing the potential timberlands. Firms needed to know how much “merchantable timber” could be removed from the stand they contemplated buying. Timber estimating thus constituted an important job at lumber companies during the late nineteenth century, but it became a task fraught with problems for corporations, one rooted in both the labor process and the environment.

CHAPTER TWO

The Labor and Nature of Valuing the Forest: Timber Cruisers, the Lumber Industry, and Forestry, 1880-1925

To the west billowed the outliers of the Apache National Forest. We cruised timber there, converting the tall pines, forty by forty, into notebook figures representing hypothetical lumber piles. Panting up a canyon, the cruiser felt a curious incongruity between the remoteness of his notebook figures and the immediacy of sweaty fingers, locust thorns, deer fly bites, and scolding squirrels.
 — Aldo Leopold, 1948.¹

Timber estimating, or cruising as it was known, emerged during the nineteenth century as a critical job in the burgeoning lumber industry of the United States. Across the Great Lakes region, the South, and eventually the Pacific Northwest, timber cruisers were put to work mapping and charting the number of board feet (the most common measure of lumber volume), species composition, and topography on forty-acre segments of forested land. These men, as workers for lumber firms or the U.S. Forest Service, walked the woods alone or in pairs recording figures and sketches in notebooks; interpreting their environment in a very specific way. Though their labor evokes romanticized Thoreauian images of “walks in the woods” or Muir-esque meditations on reaching the sublime in the wilderness, two aspects of their work must be clearly understood. First, as F.J. Underhill, a cruiser in Cloquet, Minnesota noted in a letter to Herman H. Chapman, professor at the Yale Forest School, in the summer of 1909: “Of all the young men I have started out with and tried to educate in this work in 30 years, I only know of 2 that have turned out to be

¹ Aldo Leopold, *A Sand County Almanac and Sketches Here and There* (1949; repr., New York: Oxford University Press, 1989), 133-4. For more on the cruise of the Apache National Forest which Leopold led in 1910, see the recollections of another member of the party, R.E. Marsh, “Timber Cruising on National Forests of the Southwest,” *Forest History Newsletter* 13, no. 3 (1969): 22-32.

cruisers. This work is hard there is none harder. Living poor. Storms. Cold. Flies. Long distances to walk and pack provisions etc. discourages many.”² Timber cruising was hard work, and cruisers’ experiences in the far reaches of the boundary waters of Minnesota and Ontario, the piney woods of western Louisiana, or the Cascades of Oregon, were fraught with challenges. Cruising must be understood as labor, and cruisers as workers. Second, and following from the first, these cruisers did not voyage into “the wilderness” to temporarily (and ironically) escape the very capitalist modernity that made recreational trips possible, as others like Teddy Roosevelt did, but rather to extend the reach of that modernity itself.³ Timber cruisers were commodifiers. They performed the labor of radically simplifying ecosystems – the forests of North America – into calculations of millions of board feet.⁴ As renowned ecologist and former U.S. Forest Service forester, Aldo Leopold, observed in the epigraph of this chapter, these men turned their walks in the forest into numbers, and those numbers became lumber piles. Measuring the merchantable resources of the forest was the first step in the chain of inscribing price on nature, transforming an ecosystem into an economy.

This trick performed by timber cruisers – the transfer of standing merchantable timber into numbers – makes them crucial for understanding the lumber industry from the late nineteenth century through the first third of the twentieth century. Though the transition of ecosystem into raw material, into industrial commodity is a well-worn story in some ways, there is little written on the labor and (technical-ideological) control

² F.J. Underhill, letter to Herman H. Chapman, July 5, 1909, Box 86, Folder 881 Herman Haupt Chapman Papers (MS 134), Sterling Memorial Library, Yale University (hereafter Chapman papers).

³ On “wilderness” and conservation in American history see William Cronon, “The Trouble with Wilderness” in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W.W. Norton, 1996), 69-90; and Karl Jacoby *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (Berkeley: University of California Press, 2001), esp. 193-198.

⁴ “Board feet” (bf) is a common measure of lumber volume. 1 bf = 1 ft. x 1 ft. x 1 in.

associated with this shift.⁵ That nature could be valued is often an assumption, a starting point for analyses of the industry. Yet, this chapter suggests that this “radical simplification” was anything but straightforward, automatic, or unconscious.⁶ Instead, the autonomy and craft skill held by timber cruisers (and the inability to easily check their work) meant that they, like many other workers in the nineteenth century, retained significant control over the production process. Labor leaders “Big Bill” Haywood and Frank Bohn wrote in 1911 of this arrangement that “the manager’s brains are under the workman’s cap.”⁷ The result of this situation was that managers had to *trust* individual cruisers’ methods and estimates. Evidence from lumber companies in Minnesota and Louisiana demonstrates that, from the perspective of capitalists, relying on backwoods cruisers proved problematic at various junctures. Their autonomy, lack of professional training, and “unreliable” estimates, stood as impediments to rational – i.e., managerial-corporate – capitalism.

Partially as a result of the problems with the cruiser system as it evolved in Minnesota and the Great Lakes during the late nineteenth century, the forestry schools established across the country after 1900 began to address the problem of estimating

⁵ James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998).

⁶ Scott introduces “simplification” in *Seeing Like a State*, 2.

⁷ William D. Haywood and Frank Bohn, *Industrial Socialism* (Chicago: Charles H. Kerr, 1911), 28. Haywood and Bohn’s turn of phrase, “the manager’s brains are under the workman’s cap,” was popularized in the 1970s by labor historian David Montgomery in his *Workers’ Control in America: Studies in the History of Work, Technology, and Labor Struggles* (Cambridge: Cambridge University Press, 1979), 9-31. Montgomery showed how in the nineteenth century workers retained control over the production process in many craft industries, like iron production. The introduction of “scientific management” intentionally undermined this system, leading to a process of deskilling through many industrial sectors. Montgomery’s work was inspired by, in part, Harry Braverman’s now-classic study, *Labor and Monopoly Capitalism: The Degradation of Work in the Twentieth Century* (New York: Monthly Review Press, 1974), revived Marxist interest in the labor process, as the title suggests, and pointed to how capitalist production gradually deskilled workers. David F. Noble’s work, especially *Forces of Production: A Social History of Industrial Automation* (New York: Knopf, 1984) also responded to Braverman and used the case study of automation to show how management introduced technology in order to reduce the power of (unionized) workers.

timber. Herman H. Chapman, a professor at the Yale Forest School and an academic in favor of “practical” forestry, consolidated and professionalized the knowledge of timber cruisers during the first two decades of the twentieth century, eventually enshrining these understandings in his 1921 book *Forest Mensuration*. Equally as important, the generation of foresters who came of age under Chapman’s instruction – including 1909 Yale Forest School graduate, Aldo Leopold – took that knowledge into the lumber firms and National Forests of the United States, supplanting the methods and the personnel of cruisers.

Placing accurate values on forest resources was a problem for timber firms rooted not only in craft autonomy or technical skill, however. Instead this was an issue, ultimately, derived from the relationship of industrial capitalism to nature. In the language of Karl Polanyi in *The Great Transformation* (1944), the “problem” for an economy built on markets is the tension inherent in “the fictitious commodities” of labor and nature. Labor and nature are “nonproduced” commodities, reasoned Polanyi, and thus assigning a price signal presented problems not present in “produced” commodities like steel, sneakers, or hamburgers. In other words, labor and nature exist outside the artificiality of the market, and cannot be created or controlled by that institution *in toto*.⁸

⁸ Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (1944; repr., Boston: Beacon Press, 1957), 68-76. Readers will notice that the concept of the “fictitious commodity” bears some similarity to themes developed in the Marxist tradition. Marx’s own writings on a nature-society dialectic were of a somewhat limited nature, but since the 1980s, scholars writing in this canon have further developed this tension captured by Polanyi, describing and exploring this “second contradiction” of capitalism. In other words, alongside the contradiction within capitalist productive relations (the “first contradiction,” or the crisis tendency), there is also a contradiction between these relations and the conditions of production. The result of this contradiction is that capitalism tends to “underproduce” nature (the conditions of production), possibly leading to an economic crisis. See James O’Connor, *Natural Causes: Essays in Ecological Marxism* (New York: Guilford Press, 1998), 158-177; and W. Scott Prudham, *Knock on Wood: Nature as Commodity in Douglas-Fir Country* (New York: Routledge, 2005). John Bellamy Foster, has critiqued this “second contradiction” concept in his *Marx’s Ecology: Materialism and Nature* (New York: Monthly Review Press, 2000), suggesting that this argument is far too narrow, and that capitalism’s impact on nature extends far beyond undermining its own conditions of production. In

Efforts to professionalize cruisers represented, then, only a new regime for regulating each “nonproduced” input – nature and labor – by capital.

The unfolding of this process was not, however, pre-determined, but grounded in the contingencies of history in the American lumber industry, the state, and educational institutions. Specifically, the re-regulation of the labor of timber cruising and the methodology of valuing timber took place in a context where firms’ strategies for accumulation were characterized by the continuous movement of production. As explored in Chapter 1, this process was defined in part by a federal land policy that favored the quick disposal of the public domain in ways that did not preclude increasing concentrations of forested land in the hands of large lumber firms. Timber cruising was especially important in this history in two ways. First, during the early phase of privatization, surveyors of varying quality were hired by individuals, or struck out on their own to make land claims that could be promising. Historian Rolland Maybee called these men the “true vanguards of the frontier.”⁹ Given the low price of land, however, the surveyor was not required to (nor probably could) give especially accurate estimates of timber volumes. The second phase, considered here, involved the valuation of the land after it had been distributed by federal and state governments.¹⁰ Accurate estimates of the

other words, whether nature plays into an economic crisis theory or not, capitalism transforms nature. My own use of “the fictitious commodity” term does not necessarily need to engage this debate. I use it specifically to point to the struggle to commodify nature, withholding judgment (so far) on its relationship to “crisis.” In this way, historian Richard White’s concept of an “organic machine,” meant to emphasize the “made” and “unmade” qualities that blur the lines between the human and natural (particularly around labor), also suggests that “the natural” undergirds, but is outside the control of, human systems is also useful. See his *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1995).

⁹ Rolland H. Maybee, “Michigan’s White Pine Era, 1840-1900,” *Michigan History* 34 (1959): 395.

¹⁰ It is also worth mentioning here that the European enlightenment had awoken something of a “Quantifying Spirit” in European states. This general trend combined with Europe’s more limited timber supply led to the development of forestry and timber estimation, particularly in Germany (German speaking central Europe). See Henry E. Lowood, *The Calculating Forester: Quantification, Cameral Science, and the Emergence of Scientific Forestry Management in Germany*, in *The Quantifying Spirit in the 18th Century*,

value of the land began to matter more as it became clear that timberland was not a limitless, cheap resource. As Henry Graves, future Chief of the U.S. Forest Service wrote in 1907: “The available timber was so plentiful and cheap that a very accurate estimate of the amount on any specified tract was not essential. Usually a cruiser's guess based on a superficial examination of the land, was sufficient for the purchaser. In recent years, as the value of land has increased, greater accuracy is required.”¹¹ This context of privatized timberlands with rising prices, in other words, made cruisers important for evaluating land for purchase and also for judging how much lumber could be expected from areas that would require hefty capital investments in railroads or dams for loggers to access.

Ultimately, timber cruisers, for corporations, exercised an important control over nature and the production process because they held the ability to value the economically viable components of the forest. That control, however, rested uneasily amidst a social system that increasingly valued – and could attain – technical and regular systems of management and knowledge in other realms. Thus, the shift toward forestry-school-trained cruisers represented both more regular, “authoritative” valuations of timber *and* a transfer of social power towards “professionals.”¹² The changes in the valuing of timber were thus simultaneous shifts in environmental knowledge and social control of production. To paraphrase Haywood and Bohn, the manager’s brains belonged under the

eds. Frängsmyr, Heilbron, and Rider (Berkeley: University of California Press, 1990), 315-342; and Witold Kula, *Measures and Men*, trans. R. Szepter (Princeton: Princeton University Press, 1986).

¹¹ Henry S. Graves, *Forest Mensuration* (New York: John Wiley & Sons, 1907), 191-192.

¹² Foresters, like other groups of technical-scientific workers coalescing during the late nineteenth and early twentieth centuries, formed a professional association – the Society of American Foresters (SAF) – in order to uphold a standard of conduct, education, and advocacy for the science of forestry. Also see David F. Noble, *America By Design: Science, Technology, and the Rise of Corporate Capitalism* (Oxford: Oxford University Press, 1979). Noble’s point that science became tied to corporate capitalism applies well to the development of forestry in the United States. The tension between forestry as a support for the lumber industry, and as a discipline for investigating the forest itself continues to the present day: see Samuel P. Hays, *Wars in the Woods: The Rise of Ecological Forestry in America* (Pittsburgh: University of Pittsburgh Press, 2007).

professional's cap.

In order to capture the changes in timber cruising between 1880 and 1925 this chapter is divided into three parts. Because timber cruising was important across the nation and few written sources dealing with this topic center exclusively on Minnesota and Louisiana, where appropriate, I incorporate evidence from places across the United States. First, I explore the *labor of commodification* that timber cruisers performed by examining their working conditions and practices. The labor process examined here highlights the practical difficulties in inscribing a price on the forest. Second, I explore the issue of *trust* in mediating the relationship between lumber firms and timber cruisers as they attempted to value the forest. I suggest that in the absence of other mechanisms, firms were required to make judgments about price based on their impressions and experiences with individual cruisers. And third, I consider the efforts to resolve these problems with timber cruising by examining efforts by foresters to use scientific knowledge to professionalize – re-regulate – the process.

I. Cruiser as Worker, Forest as Working Environment

William Pinkney Lawson cruised timber for the first time as part of a reconnaissance party in the Gila National Forest in New Mexico in the early 1910s and wrote a book about his experience to correct the “surprising lack of information as to the actual life and day-to-day duties of [Forest] Service field men.”¹³ Lawson’s reminiscences of this work, *The Log of a Timber Cruiser* (1915), capture well the tension between a view of nature as beautiful or sublime and nature as a site of labor. After the party’s first day in the backcountry of Gila, the crew’s leader Frazer, and Lawson,

¹³ William Pinkney Lawson, *The Log of a Timber Cruiser* (New York: Duffield & Company, 1915), n.p.

“strolled out to Lookout Ledge, a little rocky point near camp, just at sunset.” Lawson described his view:

The broad forest falling downward and away before us stretched grandly, as mass of moving green, to the timber line. Beyond, rolling yellow hills tumbled and sprawled, lower and ever lower, till they melted into a velvet plain with the tiny silver vein of the Rio Grande winding across like an attenuated, shining snake. ... The sky and the air were alive with a warm, marvelous afterglow. ... and made the wavering outline of the far-off range throb and glow with magical opalescent hues, like the Mountains of Dream.

Lawson’s romantic recounting of the landscape came to a crashing halt, however, when Frazer commented on the same scene, saying, “We’ve got our work cut out for us here. ... Look at that canyon down there. Isn’t it a corker!” Lawson’s initial enthusiasm and awe at the landscape quickly shifted: “My exalted mood vanished as completely as died the light on the distant peaks. I gazed on the scene with new eyes. The spectacle that a moment before had been inspiring, full of a vague, beautiful promise, was gone. In its place loomed a land of menace and mystery.”¹⁴ The contrast between Frazer’s assessment of this wilderness landscape and Lawson’s speaks to how the experienced Frazer viewed their environment as *work* instead of as a scene of leisure or enjoyment that the unseasoned Lawson did. In this section of this chapter I explore the working conditions, or environment, that cruisers confronted in the forests of the United States, focusing specifically on the work of one cruiser – Lyman Ayer – in northern Minnesota. Though cruises varied considerably, recounting moments in Ayer’s career highlights the difficulty of cruising labor, the conditions under which it was performed, and the autonomy these

¹⁴ Lawson, *The Log of a Timber Cruiser*, 30-31. Another expression of the hard work and danger of cruising came from George A. Bright, a Yale Forest School alumnus, who humorously wrote to the school’s underclassmen after graduating, “By the way, I went to Louisiana with a five dollar snake proof pair of leggings and a sixty horse-power fear of being bitten. Before I went north again I sold the leggings for seventy-five cents and the fear I pass on gratis to the next class.” See George A. Bright, letter to Yale Forestry School students, 13 November 1910, “Yale Forestry Club ‘Experience Book,’ 1910-1913,” records (#7135), Forest History Society, Durham, N.C.

workers held from the managers that hired them.

In 1910 or 1911, Lyman W. Ayer, a cruiser from northern Minnesota, wrote, *Cruisers and Land Examiners' Manual: A Handbook for the Information and Instruction of the Cruiser, Land Examiner and Explorer in Northern Minnesota and Canada*, apparently at the request of the Office of the Minnesota State Forestry Commissioner.¹⁵

In 1834, Ayer was born in the Minnesota territory's St. Croix valley, north of St. Paul. He was educated almost entirely by his mother, a missionary. After serving in the Civil War, Ayer taught school in Atlanta before returning to Minnesota, where in 1873, he began cruising lands for the Northern Pacific railroad. Over the next forty years, Ayer worked as a cruiser and a surveyor in the state for a variety of lumber firms and the state government.¹⁶ Ayer's cruising manual, in other words, was written by a man whose "knowledge and experience [were] gained in 35 or 40 years active service as a cruiser in Northern Minnesota and Canada," and can be taken as a set of "best practices" in dealing with the cruisers' working environment in the Great Lakes states.¹⁷

Ayer's manual provided detailed answers to four principle questions related to the labor of cruising: (1) when should the work be done? (2) how should the work be done? (3) how many men and with what equipment? and (4) what will it cost? First, Ayer explained, cruising during the "summer" (defined as from May 1 to November 1) was much preferable to cruising during "the rest of the year." In addition to the longer working day offered in northern latitudes by the summer months, snow and "inclemency

¹⁵ Lyman W. Ayer, "Cruisers' and Land Examiners' Manual, A Handbook for the Information and Instruction of the Cruiser, Land Examiner and Explorer in Northern Minnesota and Canada," [c. 1910], Box 102.F.16.2F, Administrative files, misc., Conservation Department, Forestry Division, MNHS.

¹⁶ Clara K. Fuller, "Lyman Warren Ayer," in *The History of Morrison and Todd Counties, Minnesota: Their People, Industries, and Institutions*, vol. 2 (Indianapolis, Ind.: B.F. Bowen & Co., 1915), 661-663.

¹⁷ Ayer, "Cruisers and Land Examiners Manual," 1. In the copy of Ayer's manual held by the Minnesota state forestry department, one "EAP," wrote in pencil in the margins of the first page, "Mr. A was no doubt the most experienced cruiser and surveyor of his time."

of the weather in the winter” meant that “at least fifty percent more can be accomplished in the summer than in the winter.”¹⁸ Even the “summer,” though, offered variation: “work in the spring and early summer is often made difficult by reason of wet weather and high water.” Early August through the end of October offered an opportunity where “the maximum work can be done with the minimum of discomfort.”¹⁹ In Louisiana, limited evidence suggests that, from the perspective of cruisers, the ideal time for a cruise was in the fall and winter, as the summer heat (and potential disease environment) was at the very least unpleasant, and at the worst life threatening.²⁰

Ayer next described how the work should be done, by which he really meant how cruisers should move around in the backcountry when they were not marching across the forty-acre plots with their notebooks open. In the summer, “canoe transportation is the cheapest and most satisfactory method of operating,” and the only alternative was “packing.” Making camp with only what could be carried, though, required more frequent trips back to a town or logging camp where supplies could be procured. Winter cruising, could be accomplished, by the use of dog teams, though Ayer cautioned “if you lack experience, take my word for it, and don’t try to drive the dogs yourself.”²¹

Ayer’s description of cruising, transportation, and seasons came nine years after he completed a massive cruise for the Backus-Brooks Company (at the age of 67) of the boundary waters region between the United States and Canada along the Minnesota and

¹⁸ Reading over the diary of another timber cruiser, John Henry Goddard, who cruised in Ashland County, Wisconsin during the winter of 1881, one is inclined to agree with Ayers. His diary is peppered with references to the difficulty of traversing snow and staying warm. See John Henry Goddard, “Timber Cruising Diaries,” M77-538, Wisconsin Historical Society (Madison, Wisconsin).

¹⁹ Ayer, “Cruisers and Land Examiners Manual,” 1-2.

²⁰ In the next section of this chapter, the Calcasieu Lumber Company of Louisiana suggests it does not want its cruiser to check over some land in the summer because of his importance to the firm.

²¹ Ayer, “Cruisers and Land Examiners Manual,” 3.

Ontario border.²² Beginning in August 1902 Ayer set out in a canoe, not only documenting roughly the board feet and species composition of the forests he encountered, but also drawing maps of the complex river and lake systems he traversed. This type of cruise can be referred to as a preliminary or exploratory cruise, because the purpose, rather than tax assessment or immediate sale (explored in the next section), was meant to plan out the capacity for driving logs to a mill. Ayer included elaborate maps of the lakes and streams dotting this region, and commented on the ease of driving logs toward a mill. Canoe transportation aided this map-making as well. Backus-Brooks Company used Ayer's report as a guide in constructing one of the last large mills built in Minnesota. Instead of relying only on the milling of white pine and Norway (red) pine, as many other earlier mills had, the plant (completed in 1910) could utilize spruce, Jack pine, and fir.²³ The mill at International Falls, Minn. (until 1901, Koochiching) drew from lumber accessible from the tributaries of the huge Rainy Lake, that Ayer had first documented for the firm.

The preliminary cruise by canoe for Backus-Brooks was not the only type of work that Ayer participated in, however. Throughout the early twentieth century, as the Pine Tree Manufacturing Company (PTMC), one of the many Weyerhaeuser owned lumber firms, transformed the forests of northern Minnesota into lumber commodities for the national market in its Little Falls mill, it routinely transferred its "cut-over" land to another company, the Immigration Land Company (ILC). The ILC was based out of the same office, owned by the same people, and sought to dispose of the land by selling it as farmland. The effort to sell pinelands in northern Minnesota for farming at the very

²² "Report On Spruce and Other Timber Tributary to International Falls, Minnesota," Lyman Ayer Diary (M593), Minnesota Historical Society.

²³ Larson, *The White Pine Industry in Minnesota*, 400-402.

moment that Minnesota and the nation were rapidly urbanizing, confronted certain ecological and social limits, and this problem is explored in Chapter 5. For this chapter, however, the Pine Tree Manufacturing Company/Immigration Land Company is important for its efforts in 1914 and 1915 to get a handle on the extent and value of its cutover and (remaining) timbered lands.²⁴ As ILC wrote to a lumber manager, “We are planning on reclassifying and reappraising all of our cut over lands during the coming spring and summer. Most of our cruisers or land men have gone west ... We might in the spring wish to hire some man who is first class at classifying such lands and putting a price on each forty.”²⁵ Perhaps as a result of the declining availability of cruisers in the Great Lakes region, the man leading the PTMC-ILC cruising party was none other than 80-year-old Lyman Ayer. Correspondence from the cruisers during that summer sheds further light on the conditions and patterns of timber cruisers’ labor.

During the early summer 1914, Ayer and his crew took off on foot to document these holdings. Weather had a serious impact on how this cruise proceeded. Ayer wrote in early June 1914 that “I came in from camp last evening. Work has gone slowly this week. It rained Wednesday forenoon. Did a little in the afternoon. Wednesday night heavy rain continuing more or less severely Thursday and Friday so could not work – rained again last night and at time of writing this morning (Saturday) looks bad but I hope will break at or before noon.”²⁶ A few days later he reported:

²⁴ Pine Tree Manufacturing Company would “cut out” – cease its mill operations after exhausting its timber supply – in 1919. Minute book, box 6, vol. 4, p. 89, Northern Pine Manufacturers Association papers (P1057), Minnesota Historical Society.

²⁵ Immigration Land Company, letter to H.J. McKusick, January 12, 1914, Box 3, Immigration Land Company Papers (P940), Minnesota Historical Society (hereafter ILC papers). W.W. Potter, a cruiser in Louisiana, discussed later in this chapter, was from Wisconsin, and along with ILC’s comments regarding cruiser’s moving west, suggests that labor (and knowledge) migration, along with capital migration from the Great Lakes region was central in the development of these regions’ lumber industries.

²⁶ L.W. Ayer to Immigration Land Company, letter, 6 June 1914, Box 4, ILC papers.

From Monday the 3rd inst. to the end of the week it rained almost constantly and no time being dry enough some one could go into the brush without getting wet through. The boys worked whenever there was any chance between showers – but of course could do but little. In fact they have done more than I expected – but work done under such circumstances cannot be as good as when conditions are more favorable. ... The work, for lack of organized crews together with the extremely wet weather, has been of a desultory and unsatisfactory character.²⁷

Another member of the party wrote back to ILC around the same time as Ayer did, but more simply commented, “I am with a very much discouraged crew – nothing doing Saturday – rain – more rain Sunday – today fine misty rain in AM.”²⁸

The rainy conditions, aside from being unpleasant, however, seemed to have a strong impact on the work even when cruisers could get out to estimate. Ayer wrote to ILC:

Referring to the progress of the work; it can hardly be called satisfactory. By actual count it has rained 5 days out of seven. So far this week it has rained every day – not slight showers but very heavy. Tuesday evening, the day we had the worst storm I ever saw. One tent was blown down, blankets strewn about and wet as if dipped in a stream. The brush is more than usually dense and usually wet all day. Men will not work in the wet brush if they could – and could not if they would. Such is the conditions. Swamps and streams all flooded – and you can judge whether they can do any good work.²⁹

The variability in conditions made the work more difficult for the cruisers, cost ILC more money, and may have affected their estimates.

Ayer’s manual, third, considered the logistics of equipment and manpower, by explaining the differences in crew size and cost: “The smallest crew consists of two men, a cruiser and a compassman. Though perhaps more commonly employed than any other, it is not an economical working crew, and is not recommended except for very small jobs or for the purpose of giving men it is wished to retain continuous employment.” Instead

²⁷ L.W. Ayer, letter to Immigration Land Company, June 10, 1914, Box 4, ILC papers.

²⁸ Mark Millspaugh, letter to Immigration Land Company, [approx.] June 25, 1914, Box 4, ILC papers.

²⁹ L.W. Ayer, letter to Immigration Land Company, June 25, 1914, Box 4, ILC papers.

of these small crews, Ayer argued for a “double” crew, containing two cruisers, two compassmen, and one cook. With a group any larger, Ayer’s cautioned, too much time would be devoted to moving camp or walking to the worksite. This logic was challenged by the practices of reconnaissance crews on the National Forests, which often included a few sets of cruisers. It is unclear how large the crew was during Ayer’s 1902 cruise of the boundary waters, but in 1914 during the Pine Tree/Immigration Land Company cruise, Ayer and PT-ILC agreed to keep the size of the crew at about 5 (2 cruisers, 2 compassmen, and 1 cook), though the personnel changed as the summer progressed.

Regardless of how many sets of workers a crew contained, the division of labor is important to note. Cruisers performed the task of estimating the timber by recording figures and observations, while compassmen served the role of maintaining an accurate sense of distance traveled using the techniques of surveying. In this arrangement, the wages of the workers were not equal. Compassmen served as assistants to cruisers. According to Ayer’s 1910 manual, cruisers earned five dollars per day, compassmen three dollars, and cooks two dollars and fifty cents. In a month of cruising an expedition of two cruisers, two compassmen, and one cook could cost a company \$615 (including 40¢ per man, per day for substance). In comparison, the national average hourly wage for a head sawyer in a mill in 1911 was 55 cents, or given a 10 hour day, \$5.50 per day.³⁰ This wage rate put cruisers almost on par with other skilled mill labor on a daily basis (with compassmen and cooks trailing behind), but the seasonality of the labor (as noted by Ayer) meant that yearly income could vary considerably. Ayer’s manual, to the extent he hoped timberland owners might read it, may have also overestimated the wages earned

³⁰ “Wages and Hours of Labor in the Lumber Industry in the United States, 1932,” *Bulletin of the U.S. Bureau of Labor Statistics* 586 (Washington: GPO, 1933): 3-4.

by cruisers. F.A. Chapman, one cruiser for PT-ILC received the following letter: “We are herewith enclosing your check for May and June time, 23 days in May and 26 days in June, making 49 days at \$3.50 per day, \$171.50. This of course is on the supposition that no cruising was done on Sundays.”³¹ ILC attempted to hire another cruiser, B.F. Clark, for \$90.00 per month, or about \$3.00 per day.³² Variability in experience may have played an important role in determining wages. It is difficult to gauge the size of the timber cruising workforce during much of the period explored here, but anecdotal evidence suggests most of the larger timber companies employed at least one or two cruisers full time, but could also get a larger crew together for shorter periods of time, as ILC did in 1914.

Finally, the equipment required for timber cruising, Ayer argued, should be of the highest quality. Buying a cheap canoe, he explained, could cost you much more in the long run than investing in a quality one. Aside from canoes, tents, packs, blankets, and assorted tools, the chief necessity for a cruising trip was an adequate food supply. In addition to bacon, ham, cereal, beans, rice, and coffee, Ayer included raisins (seedless), apricots, sugar (granulated), and cream (Carnation) as important rations on an extended cruise. Ayer insisted that “it is a good ration as compared with the ration we used when ‘cruising was young,’” but added “cutting out ‘luxuries’ ... these days would be difficult to get men to ‘stand for it.’”³³

³¹ Immigration Land Company, letter to F.A. Chapman, July 28, 1914, Box 4, ILC papers.

³² Immigration Land Company, letter to B.F. Clark, July 28, 1914, Box 4, ILC papers.

³³ Ayer, “Cruisers and Land Examiners Manual,” 8-9. Ayer’s discussion of equipment and food points, in part, to the conclusions drawn by Kathryn Morse about gold miners in the Klondike during the same period. According to Morse, miners (and cruisers) “knew nature through labor” in some pre-industrial ways (in “disassembling nature”), but they were also fundamentally linked to an industrial nature that transported canned pork and beans, clothes, and tools across the continent to make that lifestyle possible. The Klondike and northern Minnesota were thus “industrial outpost[s].” See Kathryn Morse, *The Nature of*

Though Ayer did mention the division of labor between cruisers and compassmen, the actual methodology of timber cruising was not part of Ayer's manual. On the cruiser himself Ayer only wrote: "The men employed must be both competent and reliable. The sole purpose of their employment is that they shall intelligently observe and correctly report certain facts upon which to base large expenditures of time and money. The value of the information thus obtained is just in proportion to the ability of the cruiser to observe, and his reliability in reporting."³⁴ The lack of writing on methodology was not a result of ignorance on Ayer's part. Drawing on a personal letter written to her by a contemporary of Ayer's, historian Agnes Larson wrote in 1948:

Ayer was the first of the 'old-timers' in cruising to substitute systematic methods for the prevailing custom of guessing, which consisted largely in comparing tracts that the cruiser had seen logged. His system consisted in 'Averages taken at *regular* intervals along compass lines that *crossed* the '*formation*' at right angles.' Modern forestry practice has, to be sure, improved somewhat upon Ayer's way, but the principle on which he based his system is still considered fundamental.³⁵

Ayer had a method, and it was one earned on the job, but not written down. Ayer even cautioned employers: "Experience [for cruisers] is an absolute necessity, but experience comes high, and you do not want to educate a man and pay him too."³⁶

What was worth writing down in a manual, to Ayer, were the facts that a prospective employer might want to know before hiring a cruiser. It was not primarily an explanation of *how* to cruise, but the best conditions under which cruises might be conducted. In this way, the focus of his manual – essentially how to move around efficiently in the backcountry – foreshadowed an increasingly important development in

Gold: An Environmental History of the Klondike Gold Rush (Seattle: University of Washington Press, 2003), 9-13.

³⁴ Ayer, "Cruisers and Land Examiners Manual," 4.

³⁵ Larson, *The White Pine Industry in Minnesota*, 169-170. Emphasis in original.

³⁶ Ayer, "Cruisers and Land Examiners Manual," 4.

the northern Minnesota landscape and economy, one perhaps inversely proportional to the waning significance of the lumber industry in the state after 1900: tourism. Ayer himself was aware of this connection, closing his manual by commenting, “The foregoing instructions and information were written for the guidance of the surveyor and cruiser. ... much of it is also applicable to the needs of the explorer, hunter, or tourist...”³⁷ Though the purpose of the cruisers’ and tourists’ or hunters’ trips to the northern end of the state were quite different, it could not escape Ayer’s mind that superficial similarities abounded.

In all the conversations between the Immigration Land Company and Ayer during the summer of 1914, and even in Ayer’s cruising manual, one obvious aspect of the work that went unsaid was the high degree of autonomy that these cruisers held in completing their work. The remoteness of many of the locations that cruisers worked gave them significant leeway in the conduct of their work. The ILC wrote to F.A. Chapman, one of the cruisers in the 1914 party: “We will be pleased to have you drop us a line about twice a week so as to keep us informed as to how the work is progressing and where you are camping and where mail will reach you.”³⁸ Of course, the correspondence between the cruisers and the head office still determined much of how the work was done, but on a day to day basis – as the earlier discussion of weather makes clear – cruisers had a lot of power over when and how they worked.

Cruisers’ position in the backcountry also made them crucial for other tasks related to the lumber industry. First, cruisers could easily detect trespasses on timberlands. If other firms or individuals had cut on their firms’ land, either accidentally

³⁷ Ayer, “Cruisers and Land Examiners Manual,” 10.

³⁸ Immigration Land Company, letter to F.A. Chapman, July 10, 1914, Box 4, ILC papers.

or intentionally, cruisers were in a position to determine the source. At the end of July 1914, for example, F.A. Chapman reported to ILC that some jack pine, along with more valuable white and Norway (red) pine on its land near Backus, Minnesota had been cut illegally.³⁹ Cruisers, in this way, when no land needed to be evaluated, could serve as general “land men” who could check up on the interests of their employers across their far-flung holdings. Cruisers were also in a position to help in the labor of fire suppression. Albert Curtis, chief fire warden in Idaho from the 1920s into the 1950s, recalled in an oral history interview that timber cruisers also held this important role in fighting fires before the establishment of cooperative fire protection measures in the inter-mountain west. The networks of cruisers in Minnesota, as well, were positioned to play an important role in spotting fires under cooperative fire protection arrangements.⁴⁰

This section has explored the process and context in which timber cruisers labored in the Great Lakes region during the early twentieth century. It has suggested that the work was difficult, variable, and subject to the whims of the weather. Additionally, the nature of the work gave timber cruisers a high degree of autonomy on the job. These features of the job of timber estimating set the stage for the “problems” of timber cruising that will be explored in the remainder of the chapter.

II. The Fictitious Commodity and Timber Cruising

In 1901, a group of Minnesota white pine producers created the Southland Lumber Company, run from Davenport, Iowa, but with landholdings exclusively in

³⁹ F.A. Chapman, letter to Immigration Land Company, July 23, 1914, Box 4, ILC papers.

⁴⁰ Albert B. Curtis, interview by Ralph Hidy, July 27, 1956, transcript, Weyerhaeuser Timber Company Oral History Collection, Oral History Research Office, Columbia University. Lawson also discussed the role of cruising parties in fire protection: see Lawson, *The Log of a Timber Cruiser*, 86-100.

Louisiana. The firms and individuals owning stock in Southland represented some of the most successful lumbermen of the north woods – the Weyerhaeusers, the Denkmanns, the Lindsays, the Bells, and the Nortons. These families, and their firms, saw the writing on the wall for the industry in Minnesota and began investing in the south. Though the Weyerhaeusers and others prominent in the industry are known much more for their entrées into the forests of the Pacific Northwest, the history of Southland serves as a reminder that these investors moved south as well. Ultimately, though it owned 1.5 billion feet of timber in Louisiana, Southland never logged or milled any of this land or timber. Instead, between 1901 and 1916-1917 it let the value of the timber increase and eventually sold it off for about a 10 million dollar profit.⁴¹

Whether or not Southland Lumber Company ever cut one tree matters little for the fact that they were forced to value their holdings, an act that required the labor of timber cruisers. In the spring of 1913, as Southland attempted to sell some of its acreage to the Louisiana Long Leaf Lumber Company (LLLLC), an arm of the Missouri-based Louisiana lumber empire directed from St. Louis by Captain J.B. White, the firm faced squarely the problems of getting “accurate” valuations of their land. This episode revealed the centrality of trust in defining the relationship between the firms and the cruisers, and the extent to which the manager’s brains were under the workman’s cap.

On May 21, 1913 Southland Assistant Secretary, Treasurer, and board of directors member, Fred Wyman, wrote to W.W. Potter, timber cruiser for Southland. Referring to the recent “joint cruise” that he had made with a Mr. McDaniel, a timber cruiser for the LLLLLC, Wyman confronted Potter with some troubling information. First, Wyman

⁴¹ “Southland Lumber Company, Complete Financial Report (From Organization in 1901 to Dissolution in 1927),” Box 118, Laird, Norton Company papers (ALPHA), Minnesota Historical Society (hereafter Laird, Norton Company papers).

reminded Potter that he had actually cruised (with two other men: May and Connor) these same tracts of land before Southland bought it, in 1901 (see Table 1). Then he wrote, “Your original estimate on these lands showed 40,510,000 ft. of large pine, and 6,530,000 of small pine, total of 47,040,000 ft. The estimate of you and McDaniel just received, shows 32,190,000 on the same land with no mention being made of any small timber. Eliminating the small timber in your original estimate, it will then be 25% higher than this new estimate just received.” Hoping to give Potter the benefit of the doubt on this dramatic difference, he suggested, “the two estimates could not have possibly been made on the same land. Can it be possible that at the time of the original estimate, you were on the wrong descriptions [plots of land].” Then he concluded by referencing a letter Potter wrote when he was charged to re-cruise the area, writing, “In your letter of May 5th, 1913 you state ‘The estimates made in 1901 by Mr. May and myself are conservative, and will over-run,’ and now to have an estimate that is accepted by you practically 8 million feet short, leads us to think there must be something wrong somewhere.”⁴²

Table 2.1: Comparison of Potter Estimates, 1901 and 1913 (in board feet)		
	1901	1913
	Potter, May, and Conner	Potter and McDaniel
“small timber”	6,530,000	---
“large timber”	40,510,000	---
TOTAL	47,040,000	32,190,000
Adapted from chart attached to Fred Wyman, letter to George Lindsay, May 24, 1913, Box 118, Laird, Norton Company papers.		

In the weeks after Wyman suggested that “there must be something wrong

⁴² Fred Wyman to W.W. Potter, letter, 21 May 1913, Box 118, Laird, Norton Company papers.

somewhere,” the management of Southland, as well as Potter himself, struggled to establish what created such a disturbing deviation in the information produced by the same person. Writing from Leesville, Louisiana, Potter replied to Wyman’s letter quickly. Sadly, for all involved, he dismissed the notion that he had cruised the wrong land. Instead, he stood by his assertion that the 1901 cruise with May and Connor had been conservative, and argued that McDaniel – his counterpart from the LLLLC – had unduly influenced the new 1913 cruise, making it totally unusable. He wrote, “I was not satisfied with my approved estimate with McDaniel. I think the timber is about holding its own, the growth about compensating for the death and destruction. ... I do not want to try to agree with another party on estimate. While I find no fault with McDaniel, yet he seemed to be afraid of overestimating, and I censure myself for conceding.”⁴³ In participating in a joint cruise, supposedly the standard procedure for arriving at a mutually agreeable average of the merchantable timber on a given plot of land, Potter suggested that this standard had produced a far worse cruise than he would have alone. F.S. Bell, a director at Southland and the Calcasieu Lumber Company (also in Louisiana), in a letter to Wyman confirmed, in a way, Potter’s own defense. He wrote, “Any attempt to account for the discrepancy in the two estimates of Mr. Potter is mere conjecture, but ... I think McDaniels, who is probably a younger and more forceful man, simply ran away with Mr. Potter.” He added, “Of course the net result of this joint cruise is to rob you of your confidence in Mr. Potter’s estimates.”⁴⁴

For Southland – and Wyman in particular – the problems with this one cruise by

⁴³ W.W. Potter, letter to Southland Lumber Company, May 24, 1913, Box 118, Laird, Norton Company papers.

⁴⁴ F.S. Bell, letter to Southland Lumber Company (Wyman), May 30, 1913, Box 118, Laird, Norton Company papers.

Potter and McDaniel began to raise serious practical – and almost existential – questions. Wyman wrote to Bell on May 29, 1913: “The matter has reached a stage where we feel that a conference of our Board of Directors should be held, and the matter fully discussed, as the writer feels ... that we do not know how much timber we have, and if this is the case, how can we know what price to ask for it?”⁴⁵ He reminded Bell that the 1913 cruise also called into question the estimates of May and Conner (who had worked with Potter on the 1901 cruise). These two cruisers also worked for the Calcasieu Timber Company, of which Bell was part owner. Pull any thread, it seemed, and the system of valuation began to unravel.

In an additional letter, to another Southland director and Secretary, George Lindsay (in Duluth), Wyman elaborated on the problem: “As the matter stands now, I do not know what we have to offer, or what price should be asked for any of our timber. To confirm Potter’s estimate before, we had Bentley’s estimate on the lands sold him, also Vandergar’s estimate, each of which showed Potter’s [1901] estimate to be in line with the others. Now to have such a discrepancy, it throws us all out of line.” What Wyman meant by referencing the Bentley estimate and the Vandergar estimate was that the value other firms ascribed this land (for a time Bentley had considered buying it) seemed to produce a consensus. But now, with their own employee radically devaluing the land, much of their sense of their holding’s market value was being challenged. On the day before they received the results of Potter’s cruise, an internal Southland Lumber Company letter, likely written by Wyman, revealed how *trust* in individual cruisers, and Potter in particular, was required by firms when cruisers retained knowledge critical for valuing timber in the market but which could not be easily reproduced by others. The

⁴⁵ Fred Wyman, letter to F.S. Bell, May 29, 1913, Box 118, Laird, Norton Company papers.

letter read, “I suppose there cannot be much doubt as to the correctness of Mr. Potter's estimates. We have always felt as though we could rely upon them although they might possibly be a shade more liberal than Mr. May's...”⁴⁶ The next day Potter’s “correctness” was thrown into serious doubt.

In calling for a meeting of the board of directors of Southland, Wyman saw the need to “decide on some sort of a plan, which might be to have all our timber re-estimated.”⁴⁷ Part of the reason that Wyman might argue that all the timber owned by Southland needed to be re-evaluated was that this was not the first time that W.W. Potter had dramatically altered the estimated stumpage figures for the company. The Southland Lumber Company’s May 1912 annual report, for example, explained that the company “shows a reduction in our stumpage figures from report of last year, owing to the re-estimate made by Mr. Potter on certain lands previously estimated and purchased by Mr. Mortimer [a former cruiser for SLC who resigned in 1907], and which have been carried on our records based on Mr. Mortimer's estimates. On lands estimated by Mr. Mortimer at 11,535,000 feet Mr. Potter reports only 5,985,000 feet. A reduction of 5,550,00 ft.”⁴⁸ This evidence suggests that problems with the cruising at Southland had antecedents just as troubling to the valuation of the forest as in its 1913 dilemma.

In early June 1913, Bell wrote to W.W. Warren, general manager of LLLLC, summing up why his associates in the Southland Lumber Company were holding up the land deal with LLLLC:

All the information which they have heretofore had, including confirmatory cruise by the parish authorities, had given the entire confidence in Mr. Potter’s original estimate, and neither he nor they are quite able to understand the last cruise, so I

⁴⁶ Internal Southland Lumber memorandum, May 16, 1913, Box 118, Laird, Norton Company papers.

⁴⁷ Fred Wyman, letter to George Lindsay, May 24, 1913, Box 118, Laird, Norton Company papers.

⁴⁸ Southland Lumber Company, Annual Report, May 22, 1912, Box 117, Laird, Norton Company papers.

think there will be no possibility of an exchange or trade of any sort with them until they have tested out the matter and satisfied themselves as to the actual stand of timber.⁴⁹

In other words, Bell let Warren know that until Southland could trust the amount of timber it owned, it was in no position to place a market price on that land.

The same day that he wrote to Warren, Bell also offered advice to Wyman on how to proceed. He wrote, “Of course the right thing to do is get a new estimate on enough of the land, particularly in that northwestern district where the Louisiana Long Leaf Lumber Company wants to buy, so that you know with certainty whether to depend upon your Potter and May estimate or to disregard or discount them. ... but must express some doubt as to the advisability of leaving the matter to Mr. May.” First, Bell reasoned, May had the “same relation to the original estimate” as Potter, and a re-cruise by May would not have the “same authority either with you or with a buyer.” Second, Bell informed Wyman that May had worked for some of the other firms in the J.B. White empire besides LLLLC, and that “this is not a very important consideration but has a bearing even on the cruise he might now make.” Finally, Bell argued, “we would not like to have him [May] over-tax himself, particularly in hot weather,” because Calcaseiu (where Bell was also a part owner) had become “dependent upon him in keeping our relations straight with those whom we have dealings.”⁵⁰

By early July, it seems like some of the uncertainty in the valuation of the timber was removed and LLLLC and Southland were starting to firm up the pricing of a potential land deal. An unfortunate gap in the documentary record, however, prevents a

⁴⁹ F.S. Bell, letter to W.W. Warren, June 10, 1913, Box 118, Laird, Norton Company papers.

⁵⁰ F.S. Bell, letter to Fred Wyman, June 10, 1913, Box 118, Laird, Norton Company papers. As discussed in the preceding section, cruising had important seasonality to it. The “working environment” of southern Louisiana in the summer was not an environment desirable for timber estimating.

discussion of who eventually re-cruised the area. The matter could not have been entirely settled, though, because during July, Southland arranged for Potter to come from his home in Chippewa Falls, Wisconsin (like much of the capital, and many of the capitalists, in the southern industry, Potter was from the Great North) to meet with Wyman, F.E. Weyerhaeuser, and George Lindsay at the Weyerhaeuser offices in St. Paul to discuss the timber under consideration to be sold to LLLLC. Reporting on the meeting to Bell, who did not attend, Wyman wrote, “Was sorry that you could not have been with us ... also it would have given you an opportunity to talk with Mr. Potter who was also there, about his estimates, which he claims most emphatically are conservative.”⁵¹ The knowledge and authority that Potter held over the value was near total. In the final stages of a timber sale with LLLLC, the issue of trusting Potter remained at the forefront of the discussion.

By November of 1913, the directors of Southland, and even F.E. Weyerhaeuser himself, had agreed on an asking price for their Louisiana holdings that LLLLC was interested in. They asked for \$62.22 an acre on 10,848 acres of pineland, or a total of about \$675,000.⁵² The written record cuts out after this letter, but other evidence suggests that LLLLC did not purchase the land. W.W. Potter, meanwhile, did not lose his job over the issues of the summer of 1913, and remained a cruiser for Southland.

A year before the crisis of trust, valuation, and timber cruising in the Southland Lumber Company, the American Academy of Political and Social Science devoted an issue of its publication, the *Annals*, to the difficulties of investing in timberlands, and the operations of the timber bond market. Timber cruising – and the issues raised by the Southland experience – featured prominently in this discussion. The central argument

⁵¹ Fred Wyman, letter to F.S. Bell, August 6, 1913, Box 118, Laird, Norton Company papers.

⁵² F.E. Weyerhaeuser, letter to Laird Norton Co., November 19, 1913, Box 118, Laird, Norton Company papers.

presented by the authors was that an increased use of timber bonds would work to raise large amounts of capital, lead toward bigger firms, and more rationalized production and use of forests. This was a particularly important argument in the context of the crisis of overproduction and low prices that continually wracked the lumber industry for most of the first third of the twentieth century, and it became even more important after the market hit its high water mark in 1907.⁵³ Moving toward a corporate-oligopolistic lumber industry, however, required that the forests being assessed with a market price in the timber bond market be done so accurately. The reality that lay behind the fiction of the bond certificate mattered.⁵⁴ Timber cruising needed to be accurate.

An article in the issue authored by the James D. Lacey Company argued, “The investor in timber ... is entitled to receive the same intelligent report on the amount of raw material, its availability, quality, adaptability for logging and operating that a prospective purchaser of a coal field, irrigation project, water power or mine would expect to obtain.”⁵⁵ Lacey presented his own interpretation of the early history of the lumber industry in the United States to explain the increasing importance of timber cruising and “intelligent report[s]” for the industry. He pointed out that for much of the nineteenth century the basis of timber land investment was often the public domain being offered in

⁵³ Total annual lumber production and per capita consumption of lumber products in the United States peaked around 1907. See Williams, *Americans and Their Forests*, 161; and William G. Robbins, *Lumberjacks and Legislators: Political Economy of the U.S. Lumber Industry, 1890-1941* (College Station, Tex.: Texas A&M University Press, 1982), 75-89.

⁵⁴ T.S. McGrath, “Timber Bond Features,” *Annals of the American Academy of Political and Social Science*, 41, supplement, 1912, 1-8. This vision of a “rational” market was also important in light of changes in the Progressive Era and the development of anti-trust law. As described in Chapter 1, the lumber industry by the 1910s was referred to frequently as the “lumber trust,” because of the very active collusion over prices that firms engaged in in order to fight the threats of low prices. If production could be controlled and directed by a few large actors, however, this collusion would be rendered unnecessary.

⁵⁵ James D. Lacey, “The Science of Timber Valuation,” *Annals of the American Academy of Political and Social Science*, 41, supplement, 1912, 9. Lacey was an important land speculator and cruiser in the South during the late nineteenth century, and guided the Goodyear brothers in the establishment of the Great Southern Lumber Company at Bogalusa, La. See Williams, *Americans and Their Forests*, 241, 262, 280.

bulk at constant prices, but that “with increased stumpage values and the investment of large sums of money by capitalists and lumbermen ... came the demand for more detailed reports, particularly from investors who were not lumbermen or who were not possessed of the knowledge of timber values.” As Herman H. Chapman wrote in his 1915 study, *Forest Valuation*, “Methods of timber estimating are determined by the relation between the cost of doing the work and the value of the timber. The amount of care and expense justified increases with rising stumpage values.”⁵⁶ From this context, Lacey argued, “came the development of professional ‘timber cruising.’”⁵⁷

Lacey’s contrast between professional cruisers and “‘land lookers’ [who] were unable to prepare figures or written reports ... [and whose] calculations were carried in their heads from day to day and week to week” is borne out, to some extent, in the careers of two timber cruisers: Percy French and his father. French’s father was a “State of Mainer,” who had worked in Maine and Michigan before migrating to the coastal forests of northern California in the early 1880s, making him one of the first cruisers in that part of the west. Percy was born in 1882 and by the time he was sixteen he was assisting his father as a compassman, and was learning the craft of timber cruising. But the methods he learned from his father were not ones he was able to use himself after he started cruising on his own in 1906. As French recalled later in an oral history interview:

[My father] was an expert at lumbering himself because he’d cruised, bought, and sold timber for others and owned two or three mills. If he brought a cruise in on 40 acres he’d put down, say, ‘Two million board feet of timber on this,’ and this was his mill cut. He’d size up the timber when he cruised and report only what was worth milling. Dad was a great one to bring his reports in on a chip of wood. In other words, Dad was a comparative cruiser. But later on my cruises were different from those Dad did. You see, some of that timber was owned by companies in the East, and he worked for all of them. They wanted a little more

⁵⁶ Herman H. Chapman, *Forest Valuation* (New York: John Wiley & Sons, 1915), 218.

⁵⁷ Lacey, “The Science of Timber Valuation,” 11.

detail from the cruises. Well, I could see the idea and purpose of more detail while I was cruising with dad, but he couldn't make more of a record because he didn't have anyone to go with to make plats, and you have to have plats for the kind of detail that was wanted.⁵⁸

Essentially, as the size and capital invested in timberlands increased and the distance from the investors to the land grew, the informal methods of cruising practiced by French's father became less satisfactory to investors, and the expectations of a cruise changed.

Even as French embraced methods different from his father, the issue of "trust" did not disappear from the cruising experience. In the same interview, French said, "But speaking of their trust, one fellow came clear out from the East to check on my figures," after his firm had "paid a lot more for it [a section of land] than was on it due to inexperienced redwood cruisers." French and his partner, Curry, re-cruised the area and found they had paid twenty-five percent too much for the land. Expressing disbelief at French's new estimate the firm sent a representative to check on the figures. After taking a train across the country, French recounted with humor that he drove the man out to the plot of land and he just "looked around at the timber a while," and then grudgingly agreed on their new cruise.⁵⁹ In a nation connected by national markets, timber markets retained the centrality of trust.

Lumber companies' efforts to confirm the accuracy of their cruises emerges from business correspondence even when large differences were not at stake. Any additional information seemed helpful (though potentially troubling). In 1916, The Louisiana Central Lumber Company's general manager, C.E. Slagle, wrote to Natalbany Lumber

⁵⁸ Enoch Percival French and Newton Bishop Drury, interview by Amelia Roberts Fry, September 18, 1961, Regional Oral History Office, Bancroft Library, University of California-Berkeley, 2-3.

⁵⁹ *Ibid.*, 7-10.

Company of Hammond, Louisiana, for example, after learning that the latter company had also cruised the same piece of land. Slagle wrote, “We have our estimators in the field estimating the timber belonging to the Mississippi Lbr. Co. ... We have been informed that you employed the Lemieux Bros. Co., of New Orleans, Public Estimators, to estimate the holdings of the Mississippi Lbr. Co.; and for the purpose of comparison after our estimators have completed their work, we have been wondering if we could secure the loan of your estimates as a check against our estimators.”⁶⁰ Unfortunately, for Slagle, Natalbany replied that they had given the estimates back to the Mississippi Lumber Company.

Lacey’s history of timber estimating in the United States concluded with a development that made French’s own role – as a self-educated cruiser – seem transitional. Lacey argued that “the inevitable evolution has continued, until to-day it is not an uncommon thing to find throughout the west expert timber cruisers who are graduates not only of the forest schools of recognized standing, but of many of the leading eastern universities.” Countering the image of such education as “impractical,” Lacey continued:

They are not men of theory alone, as some might suppose. They have gone into the timber as loggers, packers, clerks, or compassmen. ... After such apprenticeship they have emerged woodsmen with trained minds and an ability to tell what they have seen, in addition to an expert knowledge of timber and timber values. Men of such intelligence and of proven integrity have done much to make timber cruising a profession in the true meaning of the word. Their skill and their conscientious efforts have not only won the confidence of their employers, but added greatly to the safety of investors in timber securities who wish annually millions of dollars upon the honesty and sound judgment of timber estimators.⁶¹

For Lacey, the development of a professionalized class of timber cruisers was making the

⁶⁰ C.E. Slagle, letter to Natalbany Lumber Co. (Hammond, La.), October 31, 1916, f. 1463, Louisiana Central Lumber Company records (C3660), Western Historical Manuscript Collection-Columbia, University of Missouri (hereafter LCLC papers).

⁶¹ Lacey, “The Science of Timber Valuation,” 13-14.

industry safe for large-scale investment.

In contrast to Lacey's rosy picture of the scientific, professionalized cruiser providing accurate information to the timber bond market, Thomas R. Cummins, both acknowledged the debt that firms had to timber cruisers, and also the problems that this debt entailed. He wrote: "The investors who have millions tied up in timber lands, the banks that have bought large issues of timber bonds, and the operators who are to-day cutting and marketing the world's supply of lumber, all have depended on the judgment of some timber cruiser."⁶² At the same time, though, he suggested:

[T]here are, of course, many different degrees of thoroughness with which the work may be performed. As regards honesty there are also, unfortunately, more standards than one. There have been too many instances where cruises have been made and the quantity reported as double or even triple the actual amount of timber found, or where outside property has been cruised and the timber on it reported as being upon the lands under consideration.

More than simple and outright fraud, however, Cummins pointed to the continued lack of clear methodology behind some cruisers work that led to information that was unreliable. He commented, "Frequently such cruises are mere estimates formed by the cruisers walking or riding through the tracts and guessing at what they contain. ... as the basis of a bond issue such an estimate is manifestly unreliable."⁶³

The tension in the visions of timber cruising as reported by Lacey and Cummins – on the one hand as professional and accurate, and on the other as continuing to suffer from uncertainty and potential fraud – was apparent. Further, the issues with the timber bond market highlighted by Lacey and Cummins, as with individual land sales like the 1913 Southland Lumber Company debacle, reveal the continuing importance of timber

⁶² Thomas R. Cummins, "The Timber Cruiser: His Relation to Timber Bonds," *Annals of the American Academy of Political and Social Science*, 41, supplement, 1912, 62.

⁶³ *Ibid.*, 63.

cruisers in commodifying the forests of North America. As Lacey argued, one response to the problem of valuing nature was the effort at professionalizing the cruisers. Having addressed the labor process and conditions for cruising, and the problems with cruising (from the perspective of the firm), it is to the struggles over professionalization and methodology that we now turn. In other words, what were the methods of cruising? What were the “best practices” by the early twentieth century? How did these methods develop? And what type of worker should be a cruiser?

III. Rationalizing the Cruise, Professionalizing the Cruiser

In 1907, Henry Graves, professor of forestry at Yale and, after 1910, Chief of the U.S. Forest Service, published his guide to the best practices in measuring forests, *Forest Mensuration*. The topic of forest mensuration considers both the estimation of the current economically valuable components of the forest (the value of the present timber stand) and the prediction of growth rates of that forest (future size of timber stand). Mensuration was important to foresters in the early twentieth century as they sought to rationalize the process of forest exploitation, providing lumbermen with a “scientific” methodology for determining the current volume of their timber holdings and a basis for market pricing, but also as a guide for when they should cut their holdings based on future growth rates. In these early writings on mensuration it is possible to glimpse the germ of both sustained yield forestry and tree farms, though those concepts would not become important in the industry for at least two more decades. In *Forest Mensuration*, timber cruising was necessarily a large part. Though Graves cautioned that “It is absolutely impossible to learn from books how to estimate timber, for it is not a matter of method, but of

judgment, which can be acquired only through experience and practice in the woods,” he described the “general methods of the cruiser” in his study.⁶⁴

Graves identified and defined two basic methodologies of timber estimating that already dominated the practice of cruising: (1) “the strip method,” and (2) the “plot” and “radius” methods. First, Graves described the strip method: “The principle of this method is to measure the trees on narrow strips distributed systematically over the forest and covering in the aggregate a specified percentage of the total area. These strips are known as strip valuation surveys, or strip surveys. In the practice of the U.S. Forest Service the strip surveys are one chain in width, and for each ten chains of length.”⁶⁵ According to Graves, “The chief advantage of the strip method is that the sample acres represent a good average, inasmuch as they are run straight through the forest and include whatever may be in the course, whereas square plots are more apt to be located in the best areas and hence to give to large results.” Additionally, Graves suggested that this method could be done relatively quickly, with the side benefit that it offered an opportunity to create a map, as the cruiser and compassman would be systematically bisecting large portions of a given territory anyway, a reality not guaranteed with other methodologies. Basically, the strip method meant that the cruiser and compassman would walk in straight lines through a given section of forest, with the cruiser taking note of the volume of every tree 11 yards ($\frac{1}{2}$ chain) to his right and left, and after walking 220 yards (10 chains, or 1 furlong) he would have a total volume of lumber for one acre of land (4840 sq. yds, or 1 chain by 10 chains). Repeating this process on 10 or 15 percent of a 2,000 acre tract, it was possible to have a fairly accurate estimate of the volume of lumber it contained. Graves warned,

⁶⁴ Henry S. Graves, *Forest Mensuration* (New York: John Wiley & Sons, 1907), 191.

⁶⁵ *Ibid.*, 202.

however, that “the disadvantage of the method is that there is always a chance of error in estimating the width of the strips.”⁶⁶

The second method documented by Graves was the plot and radius methods, actually two distinct operations made similar by their “stationary” approach. The radius method involved:

count[ing] the trees in a circle having an estimated radius of 7 rods [38.5 yds., or 1 $\frac{3}{4}$ chains], which cover an area of about one acre. In the spruce forests of the Northeast this is about as far as one can distinguish a tree by its bark. After counting the trees the cruiser estimates the contents of an average tree and multiplies by the number of trees for the yield per acre. A quicker way is to count the trees in a circle of 60 feet radius, which covers an area of approximately one-quarter acre, or a circle of 85 feet radius, covering an area of about one-half acre. If the forest is very open, one should use a whole acre if possible, as a smaller area may not represent average conditions.⁶⁷

The plot method, by contrast, involved marking off a square acre and counting trees in that acre. Graves suggested that “plot surveys are used in estimating small growth, as, for example, second growth hardwoods in southern New England.”⁶⁸ In more advanced methodologies, strip surveys could be combined with plot samples in order to confirm the averages that a cruiser got from the strip survey. Graves’ discussion of estimating continued by exploring variations on each method, and how each method could reduce error.

The strip method and radius/plot methods described ways of sampling the forest but did little to provide guidance in the actual size of an individual tree. Toward that end, two tools developed to aid cruisers in the determination of the size of individual trees were (1) calipers and (2) the “Biltmore stick.” In conjunction with volume tables and the general tools of surveying (compass, staff, and a cross staff head or angle mirror) a

⁶⁶ Graves, *Forest Mensuration*, 209.

⁶⁷ *Ibid.*, 193.

⁶⁸ *Ibid.*, 209.

cruiser's job could be made more accurate than the *ocular* method of judging the height and diameter of a tree only by eye. The Biltmore stick was designed by Carl A. Schenck at the Biltmore estate in North Carolina where, with Pinchot, he had labored during the 1890s to demonstrate the potential and feasibility of "scientific forestry" in the United States. The stick was scaled on opposite sides to be useful for measuring diameter or height. In the case of height, a user paced 50 feet from the base of a tree and then held out the stick at arms length while looking at the tree, using the scale to provide a rough estimate of the height of the tree. Calipers were exactly what they sound like – a large device to measure the distance between opposite sides of a tree, giving the user the trees the diameter at breast height (d.b.h.), the standard measure for tree diameter. Calipers were necessarily bulky, and not as useful as a diameter tape, a tape measure scaled to measure diameter of a circle instead of circumference. Depending on the situation, a cruiser might use calipers on a sample plot to gauge the average diameters on a stand, and then use the strip method to ocularly estimate a much larger tract.

Graves was not alone in documenting the methodology of cruising. Along with Minnesota cruiser Lyman Ayer's guide (which did not actually consider the methodology of cruising), a number of works appeared in print also describing themselves as timber cruising manuals. Titles included *French's Scientific Timber Cruiser: A Compendium of Valuable Information for Cruisers or Estimators of Timber, Sawyers, Millmen or Owners of Timber Lands* (1910), *How to Cruise Timber: Adapted for Experienced Cruisers, Loggers, Foresters, Claimants or for Anyone Desiring to Learn to Estimate Timber* (1910), and *Timber Cruising Manual and Record* (1913).⁶⁹ The works are noteworthy

⁶⁹ Truman R. French, *French's Scientific Timber Cruiser: A Compendium of Valuable Information for Cruisers or Estimators of Timber, Sawyers, Millmen or Owners of Timber Lands* (Tacoma, Wash.: Truman

because they are directed towards introducing cruising to the novice cruiser without a definite methodology, or perhaps to the small landholder looking to estimate his/her woodlot, instead of toward the professional foresters that Graves sought to influence and teach. These manuals, to varying degrees, explained basic cruising techniques explored in Graves' tome.

Starting in 1909, when Graves' study on mensuration was only two years old, Herman H. Chapman, a young professor of forestry at Yale, and later the president of the Society of American Foresters, began to systematically reconsider the methodology of timber cruising. Instead of immediately publishing a new volume on the way that timber cruising *should* be conducted, Chapman sought to find out how cruising was actually being performed by the lumber firms in the United States. Chapman began his investigation (while spending the summer with the Yale Forest School students at the Pinchot family estate, Grey Towers, in Milford, Pa.) by surveying the managers of mills across the United States on the current state of practices that their cruisers' utilized. Over the next several years the results he collected revealed both the range of practices, and also the varying degrees to which managers and owners had understandings of the methodology being used by their employees. In other words, the results revealed a stark honesty by timber cruisers on the limits of their methods, and the degree of autonomy maintained by cruisers from their employers.

For example, in June 1909, F.J. Underhill, a timber cruiser for one of the Weyerhaeuser affiliated firms in Cloquet, Minnesota, informed Yale forestry professor Herman H. Chapman that:

R. French, 1910); John W. Shaw, *How to Cruise Timber: Adapted for Experienced Cruisers, Loggers, Foresters, Claimants or for Anyone Desiring to Learn to Estimate Timber* (Portland, Ore.: John W. Shaw, 1910) ; E.A. Chase, *Timber Cruising Manual and Record* (Chicago, Ill.: American Lumberman, 1913).

[A]s to method employed by one in estimating W. Pine timber I have used the plan you mention, of counting the trees for a distance of 10 rods many times, and on lands where the timber stands from 10 to 15 M⁷⁰ per acre, and the brush not too thick I have got good results. But on the lands with a stand of from 600 to 1,000 M per 40 or greater I find that I cannot get anywhere near the correct estimate.⁷¹

Underhill's letter suggests that he used a version of the strip method to cruise in Minnesota, though as Graves noted in his volume on timber cruising, "In a flat country – as for example, in the Lake States – it is more difficult than in the mountains to keep track of the counted trees and not go over the same ground twice."⁷²

At least Underhill seemed to have a plan. In a letter to Gifford Pinchot, Chief of the U.S. Forest Service, in 1901, a manager at an Everett, Washington lumber company, remarked: "For estimating standing timber: There is no particular rule, other than a man thoroughly familiar with this work, counting the number of trees on the ground, that he goes over, observing the average size, estimating so many feet to the tree, at the same time noting the general quality of the different kinds of timber and in cruising timber no record is kept of down timber, nothing but what is standing."⁷³ The cruiser for this firm likely had a concrete methodology for cruising the Douglas Fir forests of the region, but the fact that this was unknown to the manager suggests the autonomy of the labor that the worker performed, and the skill he held.

In addition to the surveying of managers and cruisers, during the summers of the 1910s, the Yale Forest School stopped sending all of its students and professors to the Pinchot estate in northeastern Pennsylvania, and instead began adjourning during the

⁷⁰ "M" is one thousand board feet.

⁷¹ F.J. Underhill, letter to Herman H. Chapman, June 26, 1909, Box 86, Folder 881, Chapman Papers.

⁷² Graves, *Forest Mensuration*, 196.

⁷³ Manager [unsigned] at Wheeler, Osgood and Co., Everett, Wash., personal letter to Gifford Pinchot, April 16, 1901, Box 86, Folder 881, Chapman Papers. Yale University. Pinchot, who worked with the developer of the "Biltmore Stick" on the Biltmore Estate in the 1890s, had a keen interest in timber estimating, may have encouraged Chapman to pursue this line of inquiry further.

summers to the Piney Woods of Louisiana to gain “practical experience” in forestry.

There Chapman and his students also learned directly from self-taught cruisers, as this letter from Chapman to C.E. Slagle, general manager of the Louisiana Central Lumber Company (LCLC) revealed:

I have written to Captain White [owner of LCLC] asking him about the services of a timber cruiser for about a month. We have in past years had a cruiser with us for the first month or so, to give the boys training in running out government lines, and incidentally to establish those lines for our subsequent training in timber estimating. I hope you have a few lines at least which have not been recently blazed and upon which the cruiser could give the boys practical experience in this work.⁷⁴

George Cromie, a student in the Yale program, described his summer schedule in and around the Clarks, Louisiana plant of the LCLC: “Our whole work here consists of four parts: - three weeks first at an elaborate survey of 50 sq. miles with topography leveling. transit., traverse, etc.; one week a study of lumbering operation in the woods; then one week for Civil Service; then two weeks at the mill work in town, lastly six weeks of estimating timber, growth studies, and the office work of the previous survey. After that, OUT IN THE COLD, COLD WORLD FOR OURS. ...”⁷⁵ In the course of thirteen weeks in Louisiana, Cromie spent almost half (six weeks) learning to cruise timber. For emerging foresters, this skill was apparently fundamental. Aldo Leopold’s experience in learning to cruise may have been typical. In a letter to his father in May 1909 Leopold wrote: “I came out within 5% on my estimate of my last forty. It has made me feel a lot more confident, as for a while I just couldn’t keep from going too low both on diameters and heights. Our work on the test forties is now complete and tomorrow we are sent out on regular cruising on new territory. ... I want to see as much of the country as

⁷⁴ Herman H. Chapman, letter to C.E. Slagle, January 5, 1910, f. 554, LCLC papers.

⁷⁵ George Cromie, letter to Yale Forestry School students, 10 April 1910, “Yale Forestry Club ‘Experience Book,’ 1910-1913 records (#7135), Forest History Society, Durham, N.C.

possible.”⁷⁶ Chapman also used these forestry students, and Yale forestry alumni, to try out new ideas and methodologies in cruising. Frank B. Notestein, a forest assistant on the Montezuma National Forest in Colorado, and a Yale alumni, wrote to Chapman: “If you have any new methods of estimating that you want tried out just send them over and I will surely give them a whirl.”⁷⁷

The growing interests and role of professional foresters also happened at the same time the federal government got into the business of managing lands through the creation and continual expansion of the National Forest system. Many of the early graduates of the Yale Forest School spent their first summers in the National Forests of the American west, like Leopold, estimating timber on the “reconnaissance parties” that sought to take stock of the State’s resources. The newly graduated foresters, armed with scientific methods of timber cruising, went into the National Forests and cruised some of the last remaining unexamined forest land in the country.

When Chapman’s study, *Forest Mensuration*, was eventually published in 1921, it codified much of what was already known about timber cruising and what he had been teaching at Yale for over a decade. The strip system of cruising, for instance, remained at the heart of much of his proposed methodology. Much of his discussion revolved around correcting for variations that the strip method might be prone to miss. For example, Chapman discussed the difficulty in working in a section of forest where the heights of the trees varied considerably, what overall percentage of a tract should be estimated to

⁷⁶ Aldo Leopold to father, letter, 11 May 1909, “Family Correspondence, 1907-1909,” Aldo Leopold Archive, University of Wisconsin Digital Collections, <http://digital.library.wisc.edu/1711.dl/AldoLeopold>, 1214-1215. Chapman detailed his method of training students in cruising (basically by working already known sample plots) in his *Forest Mensuration* (New York: John Wiley & Sons, 1921), 305-308.

⁷⁷ Frank B. Notestein, personal letter to Herman H. Chapman, 4 December 1910, “Yale Forestry Club ‘Experience Book,’ 1910-1913 records (#7135), Forest History Society, Durham, N.C.

ensure accuracy, and the role of topography in limiting accuracy. But what were the limits of accuracy in timber estimating? According the Chapman, errors could come from both ocular estimates where they could “vary in accuracy up to errors of 100 per cent, dependent upon how far the method is stretched from its original limitations. This does not include errors due to inexperience, inefficiency or carelessness.”⁷⁸ Additionally, Chapman pointed out that serious computational errors could occur: “The mechanical errors due to the operation of the law of averages have been pointed out as a function of the factors influencing these averages, the chief of which is the size of the area unit.” All things considered though, Chapman believed it was possible to get accuracy within 10 percent.⁷⁹ A letter from J.B. White, the lumber industrialist, to C.E. Slagle, his general manager at LCLC, suggests that Chapman’s estimate might have been correct for experienced cruisers. Referring to an experienced cruiser in Maine, James Sewell, White stated: “Our estimates as compared with other estimates, I don’t think have been within 10% of each other in that large timber, but this is a well known estimator [Sewell] and gives references as to accuracy of work, who owns up that if he gets within 10% he does pretty well.”⁸⁰

In addition to codifying the methodology of timber cruising, Chapman also made a case for what type of person should be performing the cruising. He argued:

Mechanical methods of timber estimating, dependent upon the measurement of diameters and heights with instruments and securing the mechanical average stand per acre by strips, do not require anything more than conscientious work and care in details. Skill and training enter with the application of the laws of averages. ... The demand for training is increased by the use of ocular methods of measurement and reaches its maximum in the application of cull for defects and in judging the quality of timber. Aside from familiarity with cull and grades, there

⁷⁸ Chapman, *Forest Mensuration*, 301.

⁷⁹ *Ibid.*, 302.

⁸⁰ J.B. White, letter to C.E. Slagle, March 22, 1917, f. 1508, LCLC papers.

is no principle of timber estimating that cannot be learned in a month's intensive training.⁸¹

Perhaps unsurprisingly, this intensive training was exactly the way that Chapman had educated the students at the Yale Forest School as they spent their summers at the Pinchot estate in Millford, Pa. or on the lands of the Louisiana Central Lumber Company in western Louisiana. To Chapman:

The common impression that it takes several years to develop ability as a timber cruiser is based upon the unscientific methods employed in training these men. They usually acquire their skill by a maximum of hard work in the woods, with a minimum of accurate comparisons of the estimated volumes with an actual cut. ... The only reason that such individuals have in the past continued to practice timber cruising as a profession is the almost complete absence of a reliable check on their results for years at a stretch, and the comparative indifference of purchasers to the accuracy of estimates due to a rising market and a plentiful lumber supply.⁸²

The increasing quality of university educated timber cruisers suggested that the days where cruisers would be able to get by on the remoteness of their tasks were numbered. Though his *Forest Mensuration* became an important book in forestry, his role as an educator of the people who would go out and apply his method seems just as or more important for timber cruising in the twentieth century. His work reveals, in part, a middle ground of increasing technical complexity and a changing standard of trust in timber cruising.

IV. Conclusion: Cruising and the American Lumber Industry

The shift from cruisers like Lyman W. Ayer to the forestry-school-trained professionals of Herman H. Chapman was a messy process. These two models of cruising overlapped, existed simultaneously, and only gradually did Chapman's model succeed.

⁸¹ Chapman, *Forest Mensuration*, 303.

⁸² *Ibid.*, 303-304.

Regardless of this division, I argue that in the late nineteenth and early twentieth century the labor of, and critical knowledge held by, timber cruisers in estimating the volume of merchantable timber contained in any given forest plot was essential in the commodification of forest lands in the United States. At no point did the number of cruisers constitute more than even a small share of the total number of workers laboring in the woods for the lumber industry. It was their specific task made them important actors.

Historians, though, have not addressed what the experience of cruisers can tell us about the development of markets, the environment, and labor in the United States. First, cruisers radically simplified forest ecosystems by transforming the meaning of these environments to numbers on the volume of merchantable timber stands, performing the “labor of commodification.” Further, the autonomous nature of cruisers’ labor and its artisanal and relatively informally gathered expertise kept the “manager’s brain under the workman’s cap” and made *trust* between the cruiser and the firm’s management the central mediator of this technical information. In essence, the worth of a cruiser’s report had as much to do with the millions of board feet they estimated in a given stand as with their relationship to the owners of the land on which they labored. The personal basis of this information’s veracity became obvious when two cruisers’ estimates clashed, or even when one cruiser’s own estimates changed, as was shown with W.W. Potter and Southland Lumber Company during 1913. That both labor and nature can be understood as “fictitious commodities” can explain, in part, the problems firms faced in the estimation process. Finally, the uncertainty of this type of authority did not sit well with the dictates of the increasingly concentrated, managerial capitalism that was developing

in the United States. As forestry schools sprung up across the nation, each promising to lumber companies that “practical forestry” would be a boon to the industry, timber cruising became an obvious target for rationalization. These ideas also developed alongside the ideology of “scientific management” in the early twentieth century. Henry S. Graves and Herman H. Chapman, as professors at the Yale Forest School, made forest mensuration central components of their contribution to maturing American forestry. Ultimately, codifying the practice of estimating timber in forestry textbooks and curricula constituted both shifts in the social control of technical expertise and also further rationalized authority over nature.

CHAPTER THREE

Working Environments in Logging: Minnesota, 1870-1920s

In the winter of 1901, a twenty-one year old lumberjack named Horace Glenn described the conditions he faced in logging camps north of Duluth, Minnesota in letters to his parents. He wrote of logging that “I believe I enjoy the work better than any I ever did before.” Serving as part of a crosscut saw team, he concluded this task was “the best job in the woods, the time passes quickly and although it is very cold, from zero to 30 below so far, you don’t notice it so much in the timber and what I eat at home would be scarcely a light lunch for me here.” In his first winter in the logging industry, Glenn was no stranger to outdoors work, having previously labored on a public land survey crew during the fall of 1898 in South Dakota. Seeing sawing as more than just an opportunity to breathe in crisp dry air, Glenn also appreciated the autonomy saw crews maintained over production: “There is no boss over you while you work, you go into the woods and saw all day and give in your logs at night. We saw from 80 to 110 according to the size of the timber. There are three men in a gang, an undercutter and two sawyers and you are alone all day.” A particular division of labor defined the work of the saw crew: “The undercutter,” Glenn explained to his parents, “notches the trees[,] measures them when down and cuts off the tip and all you have to do is to saw. It is steady but if you know how to saw and have a good partner it is not hard.”¹ Later in the winter, writing from another logging camp to which he had migrated, Glenn was not as sanguine about woods work. The weather in northern Minnesota remained cold and snowy through the end of

¹ Horace Glenn, letter to parents, January 6, 1901, Andrew W. Glenn and family papers (A. G558), Minnesota Historical Society (hereafter Glenn family papers).

March, and Glenn found moving around the forests to be “growing very irksome. We have had two feet of snow in the last two weeks and it is waist deep in the woods and very wet.”²

Glenn’s views of the autonomy of sawing and the difficulty of walking in waist-deep wet snow each constituted elements of the *working environment* of logging in Minnesota. This environment was comprised of the social and spatial organization of production, as well as the environmental conditions workers encountered and endured. In other words, Glenn’s day was defined by the wage relationship that placed him in the woods, his cooperation with fellow sawyers, the physical distance from his boss, as well as the heavy snow he waded through and the thickness of the trees he cut.³ Glenn’s three-man saw crew was only one of nine saw “gangs” working from the same logging camp during 1901. This meant that there were likely an additional 60 to 70 men working in the camp – skidding and hauling logs cut by the sawyers – bringing the total number of workers in this camp to around 100, an average size.⁴ Each job in the camp positioned workers with slightly different sets of constraints and risks. Despite these differences,

² Horace Glenn, letter to parents, March 24, 1901, Glenn family papers.

³ This chapter is grounded, in part, in efforts since the mid-1990s to bridge the concerns of environmental and labor history through the examination of the simultaneous construction of the material and social-cultural conditions of work. This project has been advanced best by Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1996); John Soluri, *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States* (Austin: University of Texas Press, 2005), esp. 139-152; Myrna Santiago, *The Ecology of Oil: Environment, Labor, and the Mexican Revolution* (Cambridge: Cambridge University Press, 2006); and Thomas G. Andrews, *Killing For Coal: America’s Deadliest Labor War* (Cambridge, Mass.: Harvard University Press, 2008), esp. 124-125; and Arthur F. McEvoy, in “Working Environments: An Ecological Approach to Health and Safety,” *Technology and Culture* 36, no. 2, Supplement (1995): S145-S173. In this chapter too, I follow Soluri in suggesting that “living environments” should be considered alongside “working environments.”

⁴ Estimate of total workers in camp based on data from Herman Haupt Chapman report describing logging camp labor force composition, 1903-1904. See Herman Haupt Chapman, “Report on the Methods of Lumbering in Minnesota, with special reference to the tract operated by the Duluth Logging and Contracting Company, at Island Lake, north of Duluth, Minnesota during the winter of 1903-04,” Box 52, Herman H. Chapman papers (MS 134), Sterling Memorial Library, Yale University (hereafter Chapman papers).

these workers collectively created and participated in a logging working environment that served the needs of lumber capitalists and left workers exposed to dangerous on-the-job conditions. Accidents were a frequent occurrence in the woods. Often attributed to individual negligence, they were more rightly described as produced by the ideological, spatial, and environmental structures of the industry. Workers, though constrained by these spaces, also exploited the geographically decentralized nature of production by using their own mobility – their feet – to move to another camp, or take a break from logging. Though considered less valuable to lumber companies than relatively highly paid timber cruisers, lumberjacks were nonetheless also able to articulate a level of autonomy that frustrated lumber company managers.

The conditions of the logging working environment in Minnesota during the late nineteenth and early twentieth centuries, however, merged almost seamlessly with workers' *living environment* – the bunkhouse and logging camps in which they ate, slept, and recreated. In contrast to logging later in the twentieth century when car travel allowed workers to return to their homes at night, in the late nineteenth century Lake States lumber industry workers lived in isolated lumber camps scattered across the northern reaches of Minnesota, Wisconsin, and Michigan. Frequently housing between 100 and 200 workers, these remote locations contained just a few rough, temporary structures for housing and feeding workers and draft animals. As in other industries relying on migrant labor, lumber camps were classic “homosocial” spaces – almost exclusively male, including camp cooks and other types of labor frequently coded as female. Even recreation was rearranged for this single-sex world. During Saturday night dances in lumber camps, men who wanted to dance the woman's part in a square dance

would don a flour sack as a faux dress or tie a white handkerchief around their arm.⁵

In 1914, P.A. Speek, an investigator for the U.S. Commission on Industrial Relations, observed how the difficulties facing those living in labor camps, not only in logging, but also railroad construction and agricultural labor, stemmed from a mix of forces present in their working and living conditions. In an unpublished report on labor camps in the U.S., based partly on examinations of logging camps in northern Michigan, Speek concluded:

Conditions in the labor camps are, in general, below the minimum of decent earning and living. Insanitary conditions [*sic*], low wages, long hours (overtime and Sunday work are seldom paid for at increased rate), accidents, diseases, exploitation of laborers by boarding companies, commissary runners and employment agents, and through the private system of hospital fees – all these are such that a laborer, no matter how strong and healthy he may be, can not stand work in a labor camp continuously; at certain intervals, when he is ‘all in,’ he has to quit his job to take a ‘rest,’ usually in the city.”⁶

The list of maladies described by Speek suggests the fluidity of the problems of working and living faced by workers and also points to the necessity of examining the living and working environments in logging in Minnesota simultaneously.

Pulling from descriptions of work and life in Minnesota by workers, managers,

⁵ Leonard Costley, interview by Bruce C. Harding, August 3, 1957, transcript, Interviews with Pioneer Lumbermen (P2385), Minnesota Historical Society, 18. Women did sometimes work in logging camps as cooks, though the standard seems to have been for men to do this work. On homosocial spaces in another industry during the nineteenth century, see Susan Lee Johnson, *Roaring Camp: The Social World of the California Gold Rush* (New York: W.W. Norton, 2000).

⁶ P.A. Speek, “Report on Conditions in Labor Camps,” U.S. Commission on Industrial Relations, 1912-1915 unpublished records of the Division of Research and Investigation: reports, staff studies, and background research materials (Frederick, Md.: University Publications of America), microfilm reel 13, frame 0414, 6 (hereafter CIR reel: frame, page). The CIR was formed by an act of Congress in 1912 at the recommendation of President Taft to “inquire into the general condition of labor in the principle industries of the United States ... especially in those which are carried on in corporate forms.” The report of the CIR and the testimony it collected were printed by the GPO in 1915, but Congress ordered the notes and reports of the Research and Investigation staff to be destroyed. Chairman Frank Walsh wrote, “None of the reports of investigators were formally approved by the commission, and consequently they stand as the findings of individual employees of the commission.” Two sets of the documents survived (one at the State Historical Society of Wisconsin and one at the Bureau of Labor Statistics). In the 1980s, 16 reels of microfilm containing the full (existing) records of the Division of Research and Investigation Division were published by the University Publications of America, Inc. Originals are housed at the National Archives and Records Administration (RG#174, Dept. of Labor).

and government investigators, this chapter explores logging from the 1870s to the 1920s in four sections. First, it considers the spatial and temporal context in which logging working and living environments were situated. In Minnesota, logging was predominately a geographically decentralized and seasonal industry. This structure served an industry increasingly capable of extracting logs on a huge scale, but also allowed workers to use these rhythms for their own benefit. Second, I explore the major steps in the labor process of logging, describing the working environment in the woods as well as the risk and accidents faced by these workers. Third, I consider the living environment of the bunkhouse. Finally, though no permanent union movement emerged from the Minnesota woods before the 1930s, I conclude the chapter by examining the I.W.W.'s brief upending of the logging environment at the end of World War I. Through these moments, I argue the working and living environments of logging camps – structured by environmental conditions and social practices – produced accidents and unhealthy camp conditions. Simultaneously, logging in Minnesota allowed for significant mobility: for workers who participated in this seasonal labor; and for the industry, as workers' labor in these environments allowed companies to continue to move production to new land.

I. The Seasonal Rhythm and Labor Mobility in Minnesota Logging

Though logging working and living environments were highly structured at the point of production, they were part of this “nomadic” industry, and were mobile, seasonal operations. In contrast to the mill towns in Louisiana, explored in the next chapter, this system encouraged workers to participate in a loose cycle of migrant labor. As described in Chapter 1, lumber firms manipulated and relied on environmental conditions to cut,

haul, and store logs on snow and ice during the winter, drive logs on rivers during spring floods, and mill the accumulated raw material during the summer and fall. Workers earned only a part of their annual wages in winter logging camps, while laboring in a variety of occupations during other seasons. James Bell recalled his father's seasonal employment during the late nineteenth century: "From the year 1854 to 1878 father was strictly a River and Lumber man during the winter months ... in the pines of northern Wisconsin and when spring opened he piloted logs and lumber down the Wisconsin River from Grand Rapids and Stevens Point to points down on the Mississippi River, namely Prairie du Chien, Dubuque, Rock Island, [and] St. Louis."⁷ Bell and many others worked in two parts of the industry's operation – logging and driving.

Other lumberjacks incorporated logging into other labor migrations in the Great Lakes region. Alexander Carno, who also worked winter logging and spring log drives recalled how homesteaders in the Great Lakes region, like his father, used logging wages as supplemental income while expanding their farms: "That time, work in the woods in the wintertime, understand see, and spend the rest of his money trying to open that land."⁸ Another son of a homesteader, George Eitel, recalled that aside from the lumber industry "there was nothing else there for a man to do" during the winter in the region. Working in the woods represented a chance "to get a little cash money that was needed for these homesteaders." As is explored in Chapter 5 of this dissertation, homesteaders in northern Minnesota faced difficult conditions in farms on cutover forestland, making cash income in the winter all the more important. Eitel recalled, "Sometimes these homesteaders cleared ground and tried to cultivate among the stumps and stones that looked like

⁷ James H. Bell papers (A/.B433jh), Minnesota Historical Society.

⁸ Alexander Carno, interview by John Esse, August 4, 1976, transcript, Minnesota Historical Society, 10.

purgatory itself. So there was really nothing for them to do when winter came, but to head for the woods to make a living. My brother was four years older than I and so we both headed for the logging woods and earned a little money and pulled it out over the summer.”⁹ Ironically, Eitel and his brother’s labor produced stumps during the winter, and then went to removing them on their own land over the summer.

Lyman Sutton, the owner of a small logging contracting operation – called jobbers – during the early twentieth century in Minnesota also described how homesteaders formed an important source of labor for logging operations: “They were young fellows and their folks was homesteading and going along and they always knew that they could come whenever – they wasn’t with me in the summer, they went back on the farms – but they always knew they could go to work for me wherever I was and they just looked up wherever I was and would get the information down here, and they get in touch.”¹⁰ Workers were not the only source of labor in the woods that shuffled between logging camps and farm fields. Draft animals – used in skidding, loading, and hauling logs on sleighs – also followed this circuit. Farmers leased horses to logging camps for the winter and then they were returned to perform agricultural work in the summer. Marion Brown, who worked in the woods before becoming a brakeman on a railroad in Minnesota, recalled that a winter of logging left many animals overworked by the spring: “Horses would come in in the fall of the year from the North Dakota farms in beautiful shape, but when they were shipped back in the spring after winter’s logging operation they were no wheres near as good. Some of them were pretty thin.”¹¹

Other workers who did not own homesteads also participated in agriculture as

⁹ George Frederick Eitel, interview by Elwood R. Maunder, n.d. (1950s), transcript, Forest History Society.

¹⁰ Lyman Sutton, interview by John Larson, 1954, transcript, Forest History Society.

¹¹ Marion Brown, interview by John Esse, October 29, 1975, transcript, Minnesota Historical Society, 10.

wageworkers. Leonard Costley explained how while some workers would go on a log drive in the spring, others would head for the Dakotas and participate in the “mustard drive,” removing mustard weeds from wheat fields during the early part of the growing season.¹² More workers may have followed Raymond Kinkel’s understanding of the cycle: “Hit the woods, in the summer, fall of the year you hit Dakotas for harvesting and thrashing.”¹³ Employment agencies in Minneapolis and other urban centers also cultivated a reserve of laborers for the logging industry. These workers would have their transportation paid for by an agency, which they then had to work off after arriving in camp.

While seasonal change governed the types and locations of the labor workers and industries performed, *within* a given season workers also moved frequently. In fact, one of the few powers workers held in logging in the Lake States forests lay in their ability to move between camps during the winter without notice. When asked by an interviewer if he thought that employers treated lumberjacks fairly in the woods during the early twentieth century in Minnesota, Leonard Costley replied, “In those days I don’t think the employers could have taken much advantage of the men. There were too many camps, and if an employer was what we called ‘haywire’ – that’s an expression used for a fellow who isn’t any good or a camp that isn’t run right – he had a hard time getting good capable lumberjacks, and he’d have to take all the cast-offs from the other camps.”¹⁴ In other words, below some bare minimum, workers’ ability to vote with their feet kept camps in decent shape. This strategy had its limits however, possibly ensuring only a relative equality of conditions. Workers looking for a break from the physical and

¹² Costley, interview, 4.

¹³ Raymond Kinkel, interview by John Esse, April 27, 1976, transcript, Minnesota Historical Society, 34.

¹⁴ Costley, interview, 14.

psychic strain of logging could also float from camp to camp until they found better employment conditions or recovered strength. Horace Glenn described to his parents how loggers manipulated firms along this line: “After quitting Nestars [a logging camp] I went on what they call here, a camp inspecting trip, that is I travelled from camp to camp without working, being careful to make camp at meal time and then leaving or perhaps working a day or so. There are lots of men who do nothing else all winter long and make their board without any more work than walking.” Glenn reported moving to one camp where he “worked three days,” but “didn’t like the place so I didn’t stay.” Finally, after Glenn manipulated the decentralized working environments of the logging industry he found a better camp: “I have put in 7 days here and like the camp.”¹⁵

Employers attempted to limit “camp inspecting” trips and labor mobility by incentivizing workers to stay for a whole month or a whole season by paying them higher wages. At one camp where Glenn worked, this strategy meant that if he stayed “until Apr. 1st I get \$30 per month and if not I get \$26.”¹⁶ He did not make it far into February in that camp before going “camp inspecting” and thus forfeited this higher wage. It seems it was more typical of the industry that only one month’s labor was required to achieve a higher wage rate, a length of time that may still have seemed unattainable to many workers. The distance between these two wages could add up to a substantial difference for a worker, but the turnover of employees suggests that this was infrequently reached, especially by the majority of “unskilled” workers.

In 1916, Frank Gillmor, the superintendent of logging at the Virginia and Rainy Lake Company, located in northern St. Louis County, described the “restlessness and

¹⁵ Horace Glenn, letter to parents, “February – 1901,” Glenn family papers.

¹⁶ Horace Glenn, letter to parents, January 6, 1901, Glenn family papers.

inefficiency of labor” during that year by sharing with the company’s owners (including the Weyerhaeuser family) some figures on the turnover in labor crews in his annual report. Gillmor calculated that the company paid for a total of 578,816 labor days during that year, with an average of 1,924 workers employed at any given moment. Over the course of the year, however, the company settled with 22,226 workers, meaning that the “avg. men paid off daily” was 77.¹⁷ This figure showed, in other words, that Virginia and Rainy Lake “practically changed crews every 26 days.” To Gillmor, the significance of these statistics lay in their effect on labor productivity: “This restlessness always means inefficiency on the part of the laborer and seems to be getting worse all the time and is in our opinion, the greatest cause of all high costs in all logging departments.” 1916, when Gillmor recorded these figures, was an especially tight labor market, but even in a recession year, like 1921, the turnover of workers remained high. That year, the Virginia and Rainy Lake Company employed an average number 1,119 workers, but actually paid off 11,996, meaning that almost 40 workers left the company’s employ daily.¹⁸

In 1916, when turnover was highest, Gillmor lamented that labor mobility undermined work discipline in his report to the board: “Every man in direct charge of men can not crowd the men in order to obtain more work for they simply walk off the job.” Gillmor argued that “there seems to be only two courses to follow with labor; to keep the crews intact and get all the work out of them that they will perform voluntarily, which absolutely means about two-thirds of their efficiency or insist on a fair day’s labor for a good day’s pay and be crippled all the time for men and carry on this work.”

According to Gillmor’s accounting, he argued, “We have given both methods a good

¹⁷ Frank Gillmor, annual report notebook, 1910-1928, Frank Gillmor papers (P2334), Minnesota Historical Society, 1916.

¹⁸ Gillmor, annual report notebook, Frank Gillmor papers, 1921.

thorough trial during the year and really think there is no choice as they practically have the same result on the cost sheet.”¹⁹

This lack of labor discipline that frustrated Gillmor was complimented with an absolute shortage of labor during the summer of 1916. Because the Virginia and Rainy Lake Company used railroad logging extensively – instead of just horse drawn sleighs – they began running some of their logging camps in the summer. In the logging department’s yearly report, Gillmor explained to the owners, “Owing to the shortage of men all summer we never had a full quota of men in any one of our camps and several times during the summer, owing to this shortage we were compelled to shut down several camps for lack of men, starting them up again at different times when we thought we could secure men.”²⁰ Given that the industry had relied on farmers and migrant farm workers to form the backbone of its crew for many years, it is unsurprising that attempting to put together logging crews in the summer proved difficult.

The lumber industry was highly mobile during the nineteenth century. A logging camp might be used for only one or two seasons before being abandoned, and, of course, the industry continually needed to find new acreage to log in order to continue production. The industry was also highly seasonal; the logging production process exploited a particular set of environmental conditions to move logs to their mills cheaply. Workers submitted to this seasonality, forming a part of their annual labor, either on homesteads or in other seasonal industries dependent on migrant labor. Workers also manipulated the structures of logging camps by voting with their feet when they were either exhausted from working in the woods or conditions at a particular camp seemed

¹⁹ Gillmor, annual report notebook, Frank Gillmor papers, 1916.

²⁰ Ibid.

especially onerous. Going “camp inspecting,” as Horace Glenn referred to it, also offered a break for workers in the industry. This strategy – in effect using the industry’s own mobility and geographic decentralization against it – frustrated logging managers and gave workers some control over their labor. Still, workers had little control over wages or working conditions in the industry.

In 1890, the Bureau of Labor Statistics of the State of Minnesota compiled and published statistics on average wages for loggers in the state. Averaging four months of work in the woods, loggers earned wages starting from \$1.15 per day for common, “unskilled” labor. Expressed in monthly wages, as loggers and managers often preferred, the Bureau of Labor Statistics report showed, for example, that swampers (“unskilled” workers) earned an average of \$32.50, while sawyers earned over \$37.00.²¹ The state’s wage estimates may have been high because by 1901, Glenn’s wages as a sawyer were between \$26 and \$30 per month. When Herman Haupt Chapman, the Yale Forest School professor, wrote a report on logging in northern Minnesota in 1903 and 1904, he also estimated sawyers’ wages were lower than the state projected, suggesting that they were between \$26 and \$32 a month, and for swampers they were between \$26 and \$30.²²

Wages in the industry did not fluctuate according to the ideals of supply and demand alone, however. Lumber firms discussed and colluded over wages. In 1913, Charles Weyerhaeuser, head of the Pine Tree Manufacturing Company in Little Falls and son of Frederick Weyerhaeuser, wrote to another firm in northern Minnesota controlled by his family:

²¹ *Second Biennial Report of the Bureau of Labor Statistics of the State of Minnesota, 1889-1890* (Minneapolis: Harrison & Smith, State Printers, 1890), 336.

²² Chapman, “Report on the Methods of Lumbering in Minnesota, with special reference to the tract operated by the Duluth Logging and Contracting Company, at Island Lake, north of Duluth, Minnesota during the winter of 1903-04,” Chapman papers, 20.

Last week while in St. Paul in talking to Mr. Hines, brother Rudolph [Weyerhaeuser] and other lumbermen I got the impression that men for the woods were unusually plentiful this fall and that the wages were much less than they have been for several years. Will you please let me know what wages you are paying for sawyers, teamsters and swampers? What wages do you pay for these men who only stay a short time and what do you pay those that stay at least a full month?²³

In reply the following day, the manager at Cloquet Lumber Company – also partially owned by the Weyerhaeuser family – told Weyerhaeuser that sawyers there earned \$30 for “short time” work and \$35 for a full month, while swampers earned \$26 and \$30 respectively.²⁴ The Johnson-Wentworth Company, meanwhile, reported to Weyerhaeuser similar wages: “Swampers and general work men are getting \$30.00 per month if they stay a month. If they stay less than a month they get \$26.00. Sawyers and teamsters for single teams get \$30.00 to \$35.00 per month.”²⁵

Cloquet and Johnson-Wentworth, based in the same town, seemed like highly paid firms next to Frank Gillmor’s employer, the nearby Virginia and Rainy Lake Company. Based north of Cloquet in Virginia, Minnesota, general manager S.J. Cusson also wrote to Weyerhaeuser, telling him that “we say we find that men are unusually plentiful this Fall. About four weeks ago we cut the wages, which were very high at that time and had been all last season, and about ten days we gave them another cut. It looks to me now as though in the very near future we will attempt to give them another cut.” Despite, or perhaps because of, the Virginia and Rainy Lake Company’s enthusiasm for trimming wages, it already paid the lowest wages of any company Weyerhaeuser surveyed: sawyers and teamsters earned \$26.00 to \$30.00, while swampers earned \$20.00

²³ Charles A. Weyerhaeuser, letter to Cloquet Lumber Company, December 8, 1913, Box 3, Immigration Land Company papers, Minnesota Historical Society (hereafter ILC papers).

²⁴ Cloquet Lumber Company, letter to Charles A. Weyerhaeuser, December 9, 1913, Box 3, ILC papers.

²⁵ Johnson-Wentworth Company, letter to Charles A. Weyerhaeuser, December 10, 1913, Box 3, ILC papers.

to \$26.00. Not wanting to keep the Pine Tree Manufacturing Company out of the loop, Cusson told Weyerhaeuser, “I expect that in the very near future a meeting will be called at Duluth, say about the first of the year to discuss the wage question, and if so will be glad to notify your [superintendent,] Mr. O’Neil.”²⁶ By October 1914, when Pine Tree announced to its managers the rates it would be paying for the upcoming winter logging season, the firm had cut wages down even further than the companies had been discussing the preceding December. As the economy across the U.S. sagged, swampers and general labor at Pine Tree would receive \$16.00 to 20.00 a month, while sawyers would earn between 20 and 24 dollars a month.²⁷ Chapter 1 described how lumber firms worked to support prices for lumber through circulating price lists in their trade associations. Though less formal, this interaction suggests the same cooperative impulse among companies to keep wages low for loggers each season.

With little other seasonal labor available for farmers and migrant laborers during the winter months and lumber firms colluding over wage rates, workers’ earnings remained low throughout the late nineteenth and early twentieth centuries. In the early 1920s, as more road construction occurred in northern Minnesota as a result of the growth of the cutover farm population (discussed in Chapter 5), Frank Gillmor, the superintendent of logging at the Virginia and Rainy Lake Company, noted to the company’s owners that this public-sector labor interfered with the industry’s ability to hire cheap labor. Workers, Gillmor reported, voted with their feet again, choosing public highway construction over logging. Gillmor explained:

The conditions during the past two years that have worked greatly to the detriment of the logging business during about seven months of the year, has been

²⁶ S.J. Cusson, letter to Pine Tree Manufacturing Company, December 10, 1913, Box 3, ILC papers.

²⁷ Pine Tree Manufacturing Company, “statement of wages,” October 9, 1914, Box 4, ILC papers.

the great demand for labor on State and County road work which has been done on a wage basis much higher than we are permitted to pay on our logging operations. Naturally this accounts for the shortage of labor during these months, with which to do any logging.²⁸

Gillmor argued that the industry faced two choices. First, “there either has to be some constructive work done to influence the expenditure of tax money, on a basis of wages in line with the basis of wages paid by the industries in the locality where the money is expended.” Without getting legislators to lower road crew wages, he continued, “If we expect to do any amount of logging during these months it will be necessary to gauge the amount of logging that we do in line with the amount of labor available and pay a basic wage in the woods, in line with the wages being paid by the County and State road work and other employers of labor in other lines of work.”²⁹

The passing of the seasons involved the construction and dismantling of the logging working environment each year in Minnesota during the late nineteenth century and the early twentieth century. Workers engaged this environment as part of annual labor patterns, whether as semi-proletarians working cutover farms or as full-time migrant workers in agriculture or other industries. Each winter workers could “vote with their feet,” by going “camp inspecting,” thereby attempting to gain the best advantage in the industry. Yet, in this regional, spatial and industrial context, the nature of logging’s production process in logging structured the job in particular ways, making the “working environment” fraught with dangers for workers.

II. Working Environments in Logging

The particular methods and work processes employed by companies to move logs

²⁸ Gillmor, annual report notebook, Frank Gillmor papers, 1922.

²⁹ Ibid.

in Minnesota varied based on when and where logging occurred. As discussed in the first chapter of this dissertation, during the 1890s the use of logging railroads in the state became more pronounced, and after 1900 the use of steam haulers and caterpillars began replacing logging with horses. Still, there is enough continuity in production methods to allow for a reconstruction of the main types of working environments created by the industry.

The first task necessary to move trees to market was the felling of the state's large white and Norway pine trees. Herman Haupt Chapman, the Yale Forest School professor described in the previous chapter for his efforts to professionalize timber cruising, wrote a detailed analysis of the logging process in Minnesota based on his observations of a company that was logging north of Duluth during the winter of 1903-1904, just after the peak of Minnesota lumber production in 1899. With a three-man crew, Chapman described the ideal process of felling. First, Chapman explained, "The tree is notched close to the ground, 6 or 8 in. deep in large trees. The sawyers start the cut about 6 in. higher than bottom of notch and on the opposite side, and usually work facing the saw teeth." The undercutter, whose job it was to notch the tree, used an axe to make the first incision in the tree, and its placement determined in large measure the way that the tree would fall. Still, Chapman explained how the direction of the tree's fall could be altered: "Most trees lean and are easiest felled in this direction, but if necessary a tree can be felled to the right or the left of the direction of the greatest lean ... Besides starting the cut right, [small metal or wooden] wedges can be used to over-come a slight lean, or aid in diverting the direction of fall." Altering the direction of a tree's fall was necessary for avoiding other standing trees and in order to help the tree land in the area where sawing it

into logs and removing branches would be easiest. Additionally, Chapman pointed out, “If the tree then lies on uneven surface, it must be sawed so as not to divide the trunk and allow the weight of the part sawed off, to split a portion of the next log before the cut is completed. This can be done by choosing which cut to make first, or propping up the end of a log with a stick.”³⁰ Workers’ safety and ease of labor, as well as the firm’s profitability (needing unbroken logs) depended on laborers knowing how to drop a tree in a specific place.

Alexander Carno, who worked as an undercutter in the Minnesota logging industry, described how this process was both a skilled and difficult task: “Undercutting is quite, quite an art, understand see, to know how the tree falls ... so you wouldn't break them up with the other ones.”³¹ At the discretion of the undercutter, wedges would be hammered into the back of the sawyers’ cut, resulting in a change in the direction of the tree’s fall. Carno explained: “Well, you’d have to fall it that way, if you could. If you couldn’t, understand see, you’d have to wedge it that way. And you’d have to be very careful and stand when you wedged it in that way.” A misjudgment by the undercutter in planning the tree’s fall could result in a tree leaning against another tree, or “not only that but probably it hurt somebody that was sawing logs in another part of the woods down there.”³²

Though tree felling required that undercutters like Carno had a good working knowledge of several variables – how trees would fall with a given notch, when to use

³⁰ Chapman, “Report on the Methods of Lumbering in Minnesota, with special reference to the tract operated by the Duluth Logging and Contracting Company, at Island Lake, north of Duluth, Minnesota during the winter of 1903-04,” Chapman papers, 1 [numbering of this document restarted approximately halfway through, beginning with his discussion of felling trees].

³¹ Carno, interview, 6-7.

³² Ibid., 8.

wedges, and an understanding of the lay of the land – it nonetheless remained a dangerous task and one that could result in significant injuries or death to the undercutter, sawyers, or skidding crews working in the area. Logging and sawmilling – the two sides of the lumber industry – were among the most dangerous in Minnesota during the early twentieth century, only trailing mining and railroad operations. The Minnesota Bureau of Labor, Industries, and Commerce calculated that during 1909, “Fifty-Five fatal accidents and 1,115 non-fatal ones were reported by the lumbering and woodworking industries of Minnesota during the last year.”³³ Minnesota’s statistics did not separate the accidents occurring in logging from those in sawmilling, but it seems that the two principle segments of the industry were almost equally dangerous. Though in sawmills gruesome fatal and non-fatal injuries resulted from unguarded rapidly spinning saws and fast moving logs, in logging, the risks of simply being crushed by a log were much higher. Of these 55 fatal accidents in 1909, roughly half seem to be attributed to logging operations, and of those, 16 were the result of being crushed. In particular, felling trees offered plenty of opportunity for this to occur. During 1909, the Bureau of Labor reported, “Two woodsmen were killed by the trees they were felling because they ran the wrong way. Another woodsman became excited when two men yelled to him to get out of the way of a tree about to fall and ran right under it.”³⁴

Leonard Costley also recalled that the sawyers could be exposed to danger when a tree fell into other trees. “One of the main hazards in those days was the big timber. When a tree fell, there was sometimes what was called a ‘widow-maker.’ The widow-maker was a limb that was broken off the tree when it was falling and that caught on

³³ Don D. Lescohies, “Industrial Accidents and Employers’ Liability,” in *The Twelfth Biennial Report of the Bureau of Labor, Industries, and Commerce of the State of Minnesota, 1909-1910* (St. Paul, 1910), 267.

³⁴ *Ibid.*, 270.

another tree. That tree would bend over and send the limb back like an arrow. If you weren't watching you'd get hit with it. I've seen some serious accidents from that."³⁵

Louis Heinzer, also an undercutter in the Minnesota woods during the early twentieth century explained another type of risk to a feller if the tree was notched incorrectly.

Under perfect conditions, Heinzer recalled, "I've fallen trees when they'd pretty much on a lean, you had to fall them one way. I'd put in a notch, and then I'd corner notch before I sawed, so when I sawed in there, it broke." If the notching of the tree was done poorly, however, there was a possibility that the weight of the leaning tree could begin to snap the tree before the sawyers' cut met the notch. This mistake would create a situation, according to Heinzer, where "you'd have what you call a barber chair. Maybe pretty near half the butt be standing there. The rest would kick back and maybe hit you."³⁶

Essentially, without a complete cut the tree end would splinter, and with much of it remaining connected to the stump, part of the tree would swing back right into the face of the feller. Even in 2012 the Occupational Safety and Health Administration explains that the "barber chair" is one of the main risks of incorrect tree felling.³⁷

Once a sawing crew brought a tree down and cut it into logs (usually between 12 and 16 feet long), moving the logs to the landing for loading onto sleighs or railroad cars was the skidding crew's responsibility. The process of skidding is exactly what it sounds like: dragging logs across the ground. In camps where sleighs were the primary means for transporting logs to mills, H.H. Chapman explained, "The character of the country makes it possible to put in branch sleighroads within 20 or 30 rods [110 to 165 yds.] of all

³⁵ Costley, interview, 8.

³⁶ Louis Heinzer, interview by John Esse, February 26, 1976, transcript, Minnesota Historical Society, 57-58.

³⁷ "Dangerous Results of Incorrect Logging," Occupational Safety and Health Administration, accessed March 14, 2012, <http://www.osha.gov/SLTC/etools/logging/manual/felling/cuts/dangers.html>.

bodies of pine.” This meant that skidding would be done by a two-horse team without the aid of a small sled placed under the front end of the log, usually called a “dray.” In camps where railroad lines funneled the logs out of the woods, the high capital costs of rail infrastructure made it more difficult to put in as many spur roads as with sleigh ice roads. This fact made skidding longer distances unavoidable. In these camps, “Skidding distances are increased occasionally to 70 or 80 rods [385 to 440 yds.]; and for all distances above 20 or 25 rods, drays are used.” These drays eased the labor of the horses needed to pull logs. In a logging camp consisting of 90 men, Chapman calculated that 45 – a full half – of all workers would be laboring in skidding operations.

Skidding required crews of “seven men – one cant-hook man on skidway, two teams and teamsters, and four swampers.”³⁸ The “cant-hook man” used a tool, unsurprisingly called a cant-hook, to roll and manipulate the log as it was connected to the horse team and while it was being dragged. A cant-hook is a long wooden pole that’s end has a simple tong-like mechanism attached, giving the user leverage in rolling the log. After being attached to the log, two teams of horses and teamsters drove the logs to the landing, while the swampers used axes to remove branches from trees, and cleared paths for logs to be skidded. Swamping was one of the lowest paid jobs in the woods and often filled by workers unfamiliar with woods work. This inexperience may have increased their risk for self-inflicted axe wounds. Leonard Costley recalled, “I’ve also seen some severe cuts from axes by swampers for the reason that the swampers were a class of men that went broke in the cities and had never worked in the woods. They’d come up there without experience on account of an employment agency shipping them

³⁸ Chapman, “Report on the Methods of Lumbering in Minnesota ...” Chapman papers, 3.

out, and they really got cut pretty bad sometimes.”³⁹ Whether or not Costley was right about the profligate nature of swampers’ spending habits, he was certainly correct that with no clear training systems in place, workers learned on the job which potentially resulted in self-inflicted injuries before they learned less risky ways to manipulate an ax.

After the skidding crew moved logs to the landing, the loading crew transferred logs to sleds and rail cars. Loading crews included about 10 men out of the 90-man camp Chapman described. Though during the early twentieth century a variety of technological innovations were mechanizing the loading process, the main way that logs were moved onto sleds was through the use of a horse team and a device called a jammer. Essentially, a jammer was a twenty to thirty-foot high wood frame with a pulley at the top through which a rope was passed. On one side of the jammer a “cross-haul” horse team stood facing away from the jammer with the rope attached. On the other side, sleigh or rail cars pulled up alongside the jammer frame. Logs lying on the landing would be secured to the other end of the rope with a set of heavy cast iron tongs, and the horses would walk away from the jammer, pulling the rope through the jammer into the woods, and thus lifting logs over the sleigh or railcar.

The “top loader” directed this process while standing on the logs already piled on the car. Frank Werthner, who worked on a loading crew in the early twentieth century recalled how loading logs required that all of the workers involved pay close attention to the process and commands of the top loader. “And this guy up on top loading, he gives the signals, you know. When he say ‘go’ or ‘go ahead,’ whatever they have, that [horse] team is already going and when he says ‘ho’ that team will stop and hold that log right there. And when he hollers ‘come back,’ you want to be ready to come back because they

³⁹ Costley, interview, 8.

gonna trample all over you.”⁴⁰ Especially the worker driving the horses had to be ready, because the horses took commands from the top loader not the driver: “the man that drives those, those horses, he got be on the jump because when that, when that top man, on top there loading logs hollers ‘come back,’ you want to be already to start back because them horses turn around just like that and they’re coming and get right up to the road and they back right up.”⁴¹

Loading and unloading logs from sleighs and railcars offered another moment of danger in the industry. The Bureau’s 1910 report showed that “twenty-five of the 45 men severely injured by logs in 1909-10 were hurt while loading or unloading logs and 6 were teamsters in the woods hauling logs to the loaders.” Several things could go wrong in this process. The Bureau described how “one man was injured because a sleigh load of logs tipped over; another because a broken stake allowed a log to roll from a car; several were squeezed between logs on the skidways ... several were struck by falling logs while loosening chains around loads of logs.”⁴²

Louis Heinzer recalled losing a friend in a common type of loading accident in 1927. “He was breaking down rollways [landings with stacked logs] and a log come down and hit him.” The crew took the man to camp, where Heinzer “stayed with him when they had supper – the rest of the fellows went in and ate supper – then I went in and ate.” The crew was logging on the Red Lake Indian Reservation in Beltrami County, and “after supper, the foreman, camp boss kind of, got an Indian with a [horse] team.” The

⁴⁰ Frank Werthner, interview by John Esse with William Rajala, May 10, 1977, transcript, Minnesota Historical Society, 22.

⁴¹ Ibid., 21-22. In the Bureau of Labor, Industry and Commerce’s 1910 report on accidents, author Don Lescoghies noted that horses themselves presented a danger of the working environment, as the panic of horses in the woods or mills resulted in several injuries to workers. See his “Industrial Accidents and Employers’ Liability,” 273.

⁴² Lescoghies, “Industrial Accidents and Employers’ Liability,” 280.

crew hoped to take Heinzer's friend to the Bureau of Indian Affairs office on the south shore of Lower Red Lake for medical attention: "When we went to take him out the back door – why he struggled and we got him on the mattress – and before he got to Ponemah [still 25 miles from Red Lake] I spoke to him. He didn't answer. I felt his face. It was already cold."⁴³ Heinzer hypothesized at the extent of the man's injuries: "I think he struggled a little bit when we took him out the bunk shanty, and I think he had the pelvic bone broke and the collar bone, and maybe something inside there." The man's death was especially sad to Heinzer as he recalled how they planned to avoid woods work the following winter: "We planned on going up north at Two Harbors to trap [animals] the next winter. He had a place up there sixteen miles north but that got knocked in the head."⁴⁴

The lack of medical facilities available to Louis Heinzer's friend was not unusual in logging camps. The Bureau of Labor and Industries of Minnesota reported after examining lumber camps near the Boy River in Cass County in 1914 that in "none of these camps were there any facilities for giving first aid to the injured, notwithstanding that many accidents occur. ... None of the camps had bandages, tourniquets or splints and none had stretchers. ... Trainmen along the line report that men suffering from accidents in various forms are brought to the platforms where they are left for the trainmen to take care of."⁴⁵ Though it is certainly unclear if more rapid medical attention could have saved the life of Heinzer's friend, the remoteness of logging camps and a lack of safety equipment and training could make relatively minor injuries life threatening as well. The

⁴³ Heinzer, interview, 31.

⁴⁴ Ibid., 31-2.

⁴⁵ *Fourteenth Biennial Report of the Bureau of Labor and Industries of the State of Minnesota, 1913-1914* (Minneapolis: Syndicate Printing Co., n.d.), 196.

lack of adequate medical facilities commented on in Minnesota logging camps was similar to lumber mill towns in Louisiana during the same period, as is explored in the next chapter of this dissertation.

After the loading crew successfully chained logs to sleds, the final task for workers in logging camps involved using horse teams to drive these the sleighs to a river or rail spur for further transport to a sawmill. H.H. Chapman calculated that “a team can travel on a logging sled, about 24 miles per day.”⁴⁶ The construction, maintenance, and use of logging roads required a significant amount of labor. As was explored in Chapter 1, these roads could be undermined by swings in the weather, from events like mid-winter blizzards or unseasonal warm spells. Jacob Pete, a lumberjack from Ely, Minnesota, explained how a thaw could begin to affect the transport of logs via sleigh roads: “Water tanks were used to freeze the roads, so they could haul big loads. And then, you know, every once in awhile they’d get a thaw in this country. And if you don’t ice your roads, a thaw would break your roads up and stop your operation. But if you have a good layer of ... heavy ice, even in thaw you can still use that road.”⁴⁷ Keeping a “good layer” of ice on a road required continual upkeep, beginning with their construction. Before logging began, a crew would clear a road and use horse teams to drag ruts into the ground eight feet apart (much like agricultural plowing). These ruts would be gradually filled with water until, as Pete explained, “they had ruts built into the ice then so that sleighs would follow these ruts. And they’d ride very smoothly and a team of horses here, if they once get the load moving, they’d move a very large load.”⁴⁸

After ice roads were built, their maintenance was critical for making these sleigh

⁴⁶ Chapman, “Report on the Methods of Lumbering in Minnesota ...” Chapman papers, 27.

⁴⁷ Jacob Pete, interview by John Esse, May 27, 1976, transcript, Minnesota Historical Society, 19.

⁴⁸ Pete, interview, 19.

trips successful. Leonard Costley worked as a “road monkey” sustaining these highways: “A road monkey is a fellow that goes out to keep the roads clean, and takes out all the bark, and watches the ruts to see that there’s no slipping or tendency to slew off sideways. In those days when horses were used entirely for pulling, you had to keep the roads clear of the leavings of the horses.”⁴⁹ James Reid, who ran a small logging operation in northern Minnesota during the 1910s and 1920s, explained that in addition to keeping the roads clean, a crew was need to “repair them [the ice roads] every night. ... You’d run the tank every night. And every day too.”⁵⁰ The tank Reid referred to was a large sleigh supporting a tank of water that ran on the roads each night, adding water to the ruts, and digging new ones when necessary.

Hauling also involved dangers for workers in logging. Though much of Minnesota is relatively flat, where hills existed they posed problems for overloaded sleighs. H.H. Chapman observed how crews attempted to solve the problem slowing sleds down on descents: “Steep grades are tended constantly by a road monkey who keeps the ruts partially filled with sand where available, otherwise hay.” This system served to increase friction and slow the sleighs, but it was difficult to judge by eye how much sand or hay to apply: “If the loads are all the same size he can gauge it pretty well by throwing snow in when there is too much friction, but a load frequently gets stalled, and sometimes it gets started down the hill when it is a case of seeing which can go the fastest, the load or the team.” This potential for error resulted in teams of horses “often hurt and sometimes men, but with smaller loads of 5000 ft. this danger is lessened.”⁵¹

Working along an ice road with large sleighs and draft animals could also turn a simple

⁴⁹ Costley, interview, 2.

⁵⁰ James Reid, interview, July 25, 1973, transcript, Beltrami County History Center, 9.

⁵¹ Chapman, “Report on the Methods of Lumbering in Minnesota...” Chapman papers, 27.

misstep into a major injury. Wirt Mineau, a logger who entered the woods in the late 1890s, recalled a friend “who worked in lumber camps until he lost his leg by slipping under a sled runner and getting his leg caught. They had to pry up the load to get him out. They had to amputate the lower leg.”⁵²

In each of these phases in logging – felling, skidding, loading, and hauling – the working environment was not only defined by cold conditions and the social and spatial division of the labor process, but also by the skill and the considerable danger this system left workers exposed to in performing their tasks. Logging produced accidents and deaths through its very social and environmental structures. As Don Lescohies described in his report on accidents in the lumber industry during 1909 and 1910, “The weight, irregular size and shape, and general contour of logs make them treacherous things to handle. The conditions of climate, ground and light under which the work must frequently be done and the type of labor that must be depended on for much of it increases the danger.”⁵³

The culture produced in the context of these dangerous conditions in some ways celebrated the ability and masculinity of those who faced these dangers. Leonard Costley explained his sense of the danger in logging by admitting “lumberjacking was a hazardous occupation.” At the same time though, he acknowledged, “You had to be all man and half wildcat to stay on the job. A man working at that kind of work in those days was very quick and sure-footed and there had to be something contrary to ordinary work in order for a man to get caught. I’ve seen men perform some awful feats getting out of trouble.”⁵⁴ Workers who stayed on the job may have had some reason for their “half

⁵² Wirt Mineau, interview by Helen McCann White, September 30, 1955, transcript, Interviews with Pioneer Lumbermen (P2385), Minnesota Historical Society, 5.

⁵³ Lescohies, “Industrial Accidents and Employers’ Liability,” 273.

⁵⁴ Costley, interview, 8.

wildcat” attitude toward danger. The Bureau of Labor, Industries, and Commerce calculated that of the 749 incidents for which details were available in 1909-1910, 17.85 percent of those injured had been on the job for one week or less. A full 70.85 percent of accidents affected workers on the job for one year or less. If a worker made it past this point, and chose to stay in the industry their risk was lower.⁵⁵ With such a high turnover in the industry, these statistics may simply reflect that relatively few workers continued in the industry after experiencing its difficulty and witnessing other industrial accidents.

Given that there were few institutional protections for workers, injuries were not the result of simply of what Lescohies called “the recklessness called forth in fearless men by habitual association with danger.” Rather, as he put it in 1910, “it is evident that many of these accidents arise out of more or less inevitable hazards of the industry and are difficult to prevent. But some of them could probably be prevented by careful study of their causes.”⁵⁶ By the time that Lescohies and the Bureau began focusing on the issue of accidents in the lumber industry, however, the vast majority of sawmilling and logging had already occurred in the state. In 1910, the lumber industry in the state was in steep decline. The eventual passage of the state’s first workmen’s compensation law in 1913 was the mechanism through which the state attempted to address the dangers of all workplaces, logging and sawmilling among them. They presumed that in switching from an employers’ liability system – where workers had to demonstrate in court that their injury was the result of negligence of their employer – to a compulsory insurance system for compensating workers for injuries, employers would have a vested interest in

⁵⁵ Lescohies, “Industrial Accidents and Employers’ Liability,” 269.

⁵⁶ *Ibid.*, 270.

reducing on-the-job dangers, and thus their insurance rates.⁵⁷ It is unclear if this system actually produced safer workplaces – an altered working environment – in logging or lumber, though it did provide better remuneration to workers who were injured, or their families if killed.

III. The Living Environment in Logging

The working environment in logging was tightly connected to the living environment endured by workers in the industry, and the discomforts and indignities of migrant labor in the region were defined as much by the time that workers spent away from their saws and axes as with them. Logging camps were positioned, according to Herman Chapman “seldom more than two miles apart, and a two mile walk to work is considered about as far as it pays to go without constructing a new set of camps.”⁵⁸ In other words, workers based in one camp could log between four and six square miles during the course of its life, usually from one to three winters. Camps themselves were composed of several buildings. Ideally, according to Chapman, “For a 90-man camp with 12 teams[,] about an acre is cleared of brush and trees and the stumps sawed off close where they are in the way.” The structures would be arranged so that that “men’s camp and cook camp [are] side by side fronting in the same direction, rather than end to end.” Other buildings were necessary for the draft animals at a camp, with “two stables ... constructed end to end, with covered passages between for hay and oats. The other necessary buildings are an office and blacksmith shop and usually a root house. A store

⁵⁷ See Robert Asher, “The Origins of Workmen’s Compensation in Minnesota,” *Minnesota History* 44 (Winter 1974): 142-153; and “Radicalism and Reform: State Insurance of Workmen’s Compensation in Minnesota, 1910-1933,” *Labor History* 14, no. 1 (1973): 19-41.

⁵⁸ Chapman, “Report on the Methods of Lumbering in Minnesota...” Chapman papers, 11.

house, filing room and hog pen are sometimes built.”⁵⁹ Given the temporary nature of these camps and the long distances from established markets, these structures would be roughly built, usually out of local logs and poles.

For most workers, the bunkhouses were the center of life in the camps. P.A. Speek, an investigator for the Commission on Industrial Relations had perhaps the clearest image of the inside of these buildings. He described the dreary scene inside a bunkhouse in northern Michigan:

When one enters a large bunk house after supper time in winter, or in summer when the weather is bad, he is usually confronted with the following picture of the life in the bunk house: ‘The men are sitting on their bunks and benches called ‘deacon seats’ between the rows of the bunks. Almost all are smoking, their heads are drooping, their faces are serious, dreary, and most of them are silent. The air is thick, full of smoke, steam and bad smell from socks, pants and other soiled clothes hung up to dry in the bunk house.’⁶⁰

Speek’s passage, drawn from his notes and inserted directly into his report, points to several conditions commented on by others, including the cramped nature of the bunkhouses, the smell, and dirty clothes and blankets.

Charles Godfrey, a logger in Minnesota during the 1910s, agreed with Speek’s impression, commenting, “I’ll tell you some of the early camps weren’t too hot.” Bunks in a camp Godfrey worked in had beds “3 high, come in the end, 3 high, and an alley not much wider than this with a deacon seat,” a situation forcing some workers “to stay in bed, there wasn’t room for everyone else [to sit].”⁶¹ When bunks faced out into the center of the room, workers had to climb into the beds at the feet or head because there would be no space to get in on the side, giving birth to the name “muzzle loader” to describe

⁵⁹ Chapman, “Report on the Methods of Lumbering in Minnesota...” Chapman papers, 11.

⁶⁰ Speek, “Report on Conditions in Labor Camps,” 39.

⁶¹ Charles Godfrey, interview by Stan Johnson, September 27, 1973, transcript, Minnesota Historical Society, 9.

their arrangement. Beds where workers could get in along the length were referred to as “breech loaders.” A bunkhouse P.A. Speek visited in northern Michigan was likely more cramped than the scenario described by Godfrey: it “contained about 800 cubic feet of air space, and in it slept seven men; this is a little more than 100 cubic feet of air space for each man,” an amount low even for lumber camps, where “The average air space for each man in the bunk houses of the lumber camps varies from 200 to 300 cubic feet, which is about one-half of the normal sanitary requirement.”⁶² The Minnesota Bureau of Labor and Industries found in 1914 that some camps were so overcrowded that men were forced to sleep on the ground.⁶³

Even without these likely exceptional crowded conditions, bunkhouses could be unpleasant. Godfrey explained how the uneven heating affected the space: “Now you take a long bunkhouse, and they put a stove in the middle and the bull cook takes care of the fire and when he goes to bed he fills that stove up, and these fellows roast. And these fellows on the other end will freeze before morning.”⁶⁴ Workers also shared beds and blankets, meaning that lice, scabies, and bedbugs – usually referred to as “vermin” – could and did travel quickly through the camp. Louis Heinzer recalled: “And they’d be getting lice in there, and it was pretty easy for the lice to go from one bunk to the other. Just a continual run from one end to the other.”⁶⁵

The Bureau of Labor and Industries’ report indicates that there were rarely any facilities in camps for washing, sometimes just “one dirty basin and one roller towel ... furnished” for workers. They observed in one camp a sink draining “through the broken

⁶² Speek, “Report on Conditions in Labor Camps,” 27-8.

⁶³ *Fourteenth Biennial Report of the Bureau of Labor and Industries of the State of Minnesota, 1913-1914*, 195.

⁶⁴ Godfrey, interview, 9.

⁶⁵ Heinzer, interview, 12.

floor,” and they could “see stagnant and ill-smelling water which had drained there from the sink.”⁶⁶ Waste removal in the camp could also be unsanitary. The Bureau found in the camps that, “The refuse from the kitchen is thrown out of the back door of the kitchen on the surface of the ground. There was no evidence of any pit.” In one camp they described, “The privy for the camp was a pole enclosure 6x12 feet square with a low roof. It had an open pit with two poles to sit on and a pole floor. The excrement was up to the height of the seat. ... About one hundred men were required to use it. ... It was as filthy as could possibly be and the men could not be blamed for going outside.”⁶⁷

These brief impressions suggest that the living environment in logging camps could be as unsanitary – or unpleasant – as the working environment was dangerous. As with accidents in logging, the causes of these problems lay not only in individual behavior or decisions – whether a predilection for danger or filth – but in the structure with which workers engaged. Noting that no regulations covered labor camps and their workers, P.A. Speek speculated that this was due to three facts: “The political parties have no interest in the migratory laborers, who have no vote; organized labor cares comparatively little for the welfare of camp laborers; and, finally, the camp conditions are little known to the public at large, for the labor camps are usually far from the centers of population – out of the reach of newspaper reporters and the public eye in general.”⁶⁸ The very characteristics of the lumber industry – its mobility, remoteness, and seasonality – in Speek’s view all contributed to the invisibility of the living environment itself.

Despite this lack of attention, Speek and the Minnesota Bureau of Labor and

⁶⁶ *Fourteenth Biennial Report of the Bureau of Labor and Industries of the State of Minnesota, 1913-1914*, 199.

⁶⁷ *Ibid.*, 197-198.

⁶⁸ Speek, “Report on Conditions in Labor Camps,” 2.

Industries each identified changes that could be made to improve the living conditions for workers in labor camps. These suggestions, with hindsight, seem obvious, but at the time challenged the status quo. On the simple fact that few men washed their clothes, Speek wrote: “The washing of underwear and other clothes is left usually to the men themselves, but as a matter of fact they do very little, for several reasons. First, no laundry with necessary facilities is provided; second, the men are tired needing rest after the heavy work; and third, they are not accustomed to washing.”⁶⁹ The solution, then, lay in providing washing facilities, and perhaps, even a person to perform this task for all workers. Speek’s other recommendations ranged from providing ventilation and windows in bunkhouses, to giving each worker their own bunk to slow the spread of lice and bedbugs, and providing a separate room for recreation. The Minnesota Bureau of Labor and Industries would have agreed with these provisions, but focused especially on the need to regulate the disposal of kitchen waste, the establishment of rules for keeping bathrooms in the camps sanitary, and improving the cleanliness of kitchens.

Though structural forces shaped the living environment and some reformers offered structural remedies, as is too common in American history, inequalities or differences could be interpreted as inherent racial characteristics of the workers confined by those structures. Horace Glenn, the lumberjack who wrote his parents about “camp inspecting” also commented frequently on the racial characteristics of the non-white workers with which he interacted. He told his parents, “I am the first man out in the morning because walking 2 or 3 miles behind a string of swedes is something impossible to the person with a delicate nose. ... It is all odor which could only [come] from generations of unwashed ancestors and no man can hope to acquire it in one lifetime

⁶⁹ Speek, “Report on Conditions in Labor Camps,” 37.

without the aid of heredity.”⁷⁰ Glenn also told his parents that in the camp “There are probably 15 white men here to 60 swedes,” later calling these Swedish men he worked with the “cursed roundheads.” To Glenn, the unhealthy nature of workers in logging camps was a racial characteristic, not a structure of the camp itself. He told his parents of the racial uplift he was performing after he arrived at a new logging camp in February 1901 and began work as a swamper. “My swamping partner is a Norwegian of a little better grade than the average and my precepts and practice have worked wonders with him. I prevailed upon him to wash his feet after months total abstinence from water.” Other workers apparently would not do even this, a fact that continually frustrated Glenn. This seeming triumph in Glenn’s mind served as an exemplar for Americanization generally: “He differs from the others in that he is not averse to adopting American customs and learning the language. ... Now he in the course of time will probably marry and encourage his children to adopt American ways and in the course of a few generations they may hope to eradicate that distasteful foreign odor and become good citizens and my humble influence will have had some affect.” In the midst of the Philippine-American War (1899-1902), Glenn connected this act to the news of the day: “I might formulate a proverb out of this, that ‘there is more patriotism in teaching a Norwegian to wash his feet than in fighting Filipinos’ or something like that.”

The view of race and cleanliness in the logging camps espoused by “white men” like Glenn resembles Progressive Era discourses around race and health in urban tenements. In contrast to Glenn and middle class reformers’ view of living conditions as narrowly personal and racial, others understood (sometimes still paternalistically) that the conditions were the result of the space of lumber camps and the poverty of many workers

⁷⁰ Horace Glenn, letter to parents, March 10, 1901, Glenn family papers.

who only owned the set of clothes they wore upon arriving in camp. Glenn's writing also suggests the malleability of race in the Minnesota industry. To Glenn, Swedish people were ill equipped to serve in skilled and management positions, a feeling that superintendents in the camps apparently shared. As Glenn described, "In any labor requiring a degree of skill he cannot be used however. In all camps I have been in I have never seen a swede cant hook man and only one swede teamster and he got fired and they are none too good at anything else. When I get out of here I never want to see a Swede again."⁷¹ Glenn's racism, and that of managers, undoubtedly made conditions worse for Swedish workers in the industry, and perhaps exposed them to more difficult and dangerous work, but as will be shown in the following chapter, it differed dramatically from the system of racial subordination and terror in the Jim Crow South.

Investigators who encountered lumber camps during the early twentieth century had little better to say about lumber camps than Glenn, but they held more complex understandings of the causes of the problems that afflicted them. P.A. Speek, in contrast to Glenn's reading that the filthy camps were a reflection of racial heritage or ignorance, saw how the same structures that made the working environment dangerous also produced an unhealthy living environment.

IV. Coda: Labor Movements in Minnesota Logging

Through most of the history of logging in Minnesota workers engaged their living and working environments collectively only insofar as they cooperated on-the-job by moving logs through the forests and in socializing and resting in lumber camps. The main strategy they pursued that challenged the industry was expressed through their own labor

⁷¹ Horace Glenn, letter to parents, February 24, 1901, Glenn family papers.

mobility. On one hand, workers assented to migrating seasonally into the woods, which of course served the industry, but on the other hand, when workers moved between camps, went on “camp inspecting” trips, or simply dropped out of the work, they challenged the industry on an individual basis. By the time that workers in the industry acted collectively to challenge the working and living environments of logging – in 1917 – the industry in Minnesota was in steep decline.⁷² While in 1899 Minnesota produced over 2.3 billion board feet of lumber, by 1916, the year before widespread strikes in logging, it produced just 1.0 billion board feet.⁷³ In essence, when workers organized, the industry’s nomadism had left Minnesota increasingly at its margins.

Still, the Virginia and Rainy Lake Company, one of the few large remaining lumber companies in the state during the 1910s and 1920s, certainly was affected when loggers overtly challenged the prerogatives of the industry, shutting down temporarily the working environment in 1917. Beginning in 1910 and 1911, an Industrial Workers of the World (IWW) local became active in the region, but the unionism in the north woods was led at first by workers in Minnesota’s other main extractive industry: mining. After a protracted miners’ strike in the summer of 1916, the IWW sought to organize both miners and lumber workers.⁷⁴

Beginning in December 1916, mill workers organized at the Virginia and Rainy Lake Company’s mill in Virginia, Minnesota, calling for a raise in wages and shorter hours. By January 1, 1917 this mill was shuttered and workers appealed to lumberjacks in

⁷² George B. Engberg, “Collective Bargaining in the Lumber Industry of the Upper Great Lakes States,” *Agricultural History* 24, no. 4 (1950): 205-211.

⁷³ Henry B. Steer, *Lumber Production in the United States, 1799-1946* (Washington, D.C., GPO, 1948). table 4.

⁷⁴ John E. Haynes, “Revolt of the ‘Timber Beasts’: IWW Lumber Strikes in Minnesota,” *Minnesota History* 42, no. 5 (1971): 163-174.

the woods to join them on strike against the company. According to Frank Gillmor, superintendent of logging at the company, this action resulted in the “crippling of our camps 37, 38, 39, 40, 41, 42, 43, 50, and 54, 55, and 56 for the full month of January, as we were unable to get any amount of men in these camps until the latter part of the month and then we were shorthanded most of the time.”⁷⁵ Within a few weeks, however, the strike was brutally beaten with virtually all organizers put in jail or essentially exiled from the region.⁷⁶

Though this repression ultimately unraveled the “revolt of the timber beasts,” as the conflict became known, it was not the end of strikes or IWW activity in the northern Minnesota lumber industry. In 1919, the Virginia and Rainy Lake Company reported, “From September 1st to Dec. 25th when we started to operate more heavily and prepare for winter’s operations this shortage of men continued, and in addition to this, during these four months thru the agitation of the I.W.W. organizations we had the following strikes.” The firm then listed the strikes at nine of the company’s logging camps during that fall, and Gillmor calculated that “conservatively speaking, and from careful investigation, we find that about 75% of our labor belonged to the I.W.W. organization.”⁷⁷

Most insidious about the continued unrest from Gillmor’s perspective was the way that workers did not only abandoned camps when on strike, but also brought their mobility to bear at other Virginia and Rainy Lake Company camps. He explained to the firm’s owners, “they call it, ‘laying down on the job,’ doing just as little as they possibly can, quitting earlier than the rules of the camp, necessitating the foreman discharging

⁷⁵ Gillmor, annual report notebook, Frank Gillmor papers, 1917.

⁷⁶ Haynes, “Revolt of the ‘Timber Beasts,’” 173.

⁷⁷ Gillmor, annual report notebook, Frank Gillmor papers, 1919.

them, moving to the other camps and repeating the same tactics, keeping the crews at all the camps disorganized most of the time.” Essentially, what Gillmor captured was how workers were using what had been an individual tactic to manipulate the working and living environment in the woods as a tool to be used collectively to gain more control over the conditions of their labor. This was “camp inspecting” on a mass scale. He continued: “we can notice a material decrease in production since these tactics have been employed by the laborers. Their claim is, by using what they call ‘strike on the job tactics’ they are accomplishing more than by striking generally. The company is compelled in this manner to pay them wages and board them for a minimum amount of service. It is almost impossible to compute the effect of these tactics on the operating cost of our logging.”⁷⁸ This rebellion in the woods continued into 1920, where the company faced four more “general strikes” at different logging camps during the winter and spring. As the economy began to slow during the year, however, it seems that the conditions began to favor the company, with Gillmor writing that by early 1921, “our camps are fairly well supplied with men,” though he commented that workers “continue to be very restless and do not seem to come to realize the conditions as they generally exist throughout the country. As an illustration, during the week ending January 8th, we have paid off 409 men which would mean a complete turnover of our total crew every five weeks.”⁷⁹ The struggles over control of the working environment continued.

Lumber companies in the Louisiana industry also sought to control spaces of production and reproduction. As in Minnesota, they created sets of living and working environments, comprised of both environmental and spatial realities and social

⁷⁸ Gillmor, annual report notebook, Frank Gillmor papers, 1919.

⁷⁹ Gillmor, annual report notebook, Frank Gillmor papers, 1921.

ideologies, to enable the production of lumber. Instead of the seasonal working environments in logging, though, Chapter 4 examines the quasi-permanent and continually operating company towns and mill operations in Louisiana, the other main portion of the industry. This system necessarily interacted with the defining social institution of the South during the early twentieth century: Jim Crow. When workers fought back against this system in a prolonged confrontation with the industry, they did so at the peak of lumbering in the region and in ways that responded to both the structure of their working and living environments.

CHAPTER FOUR

Living and Working Environments in Louisiana Mill Towns, 1900-1920

The shibboleth of these corporations is “no divided allegiance.” Everything must operate in the interest of the company and all must give their allegiance to the company first, - even above their church. Only by enforcing this policy can the company retain absolute control. Hence anyone threatening it is, in a figurative sense, marked for slaughter.

– David J. Saposs, 1915.¹

In early June 1911, a worker in the planing mill of the Louisiana Central Lumber Company (LCLC) in Standard, Louisiana recorded the details of a relatively minor accident in the plant. It was his third day of work for the company. The planing mill was the place where rough-cut lumber from the main mills would be fed through machines and shaved into smooth-hewn boards and dimensional lumber. While photographs of the era’s planing mills show machines standing in neat rows, one former lumber worker’s recollection of the mill belies their ordered appearance. He wrote: “The planing machines give out a combined shriek and howl so overpowering it cannot be appreciated unless directly experienced. Speech is impossible; the men in the planer communicate by signs and by lipreading. ... I was also concerned that I might be permanently deafened.”²

On the day of the accident, LCLC’s new worker recounted his shift in the planing mill: “I worked ... from 7 A.M. until 6 P.M. ... At 11:30 A.M. R. Baker, a boy 15 years

¹ David J. Saposs, “Self-Government and Freedom of Action in Isolated Industrial Communities,” U.S. Commission on Industrial Relations, 1912-1915 unpublished records of the Division of Research and Investigation: reports, staff studies, and background research materials (Frederick, Md.: University Publications of America), microfilm reel 10, frame 0851, 6 (hereafter CIR reel:frame, page).

² Otis Dunbar Richardson, “Fullerton, Louisiana: An American Monument,” *Journal of Forest History* 27, no. 4 (1983): 197.

of age, got hurt while feeding the moulding machine #9.” Baker had then relayed the details of his accident to other workers, saying, “I stuck a piece in the machine then noticed that it was split on the edge; as it came near the sidehead I started to shut off the feed and a piece then flew back and hit me in the arm. The rollers were not down far enough. I pulled it out myself.” Essentially, a guard holding the piece of lumber steady did not engage and the split lumber struck Baker. The new worker continued to recount Baker’s description of the accident:

[Baker] further stated that he then looked around and found the sliver which had entered his arm. This piece had blood on it about 1 ½ to 1 ⅝” from the end and was about ⅜” or ¼” thick. The feeder of the flooring machine was the closest one to him when the accident happened. The feeder’s statement to me is as follows: ‘I was feeding #8 when this boy came along and showed me a hole in his arm. I did not see how it happened as I was not looking that way.’³

Given the noise in the mill that the worker standing next to Baker did not see or hear this incident is not surprising.

This case is typical of the early twentieth century lumber industry, where the U.S. Bureau of Labor Statistics reported that during 1940 “in logging about 1 in every 6 employees suffered a disabling injury. In sawmills about 1 in every 12 was injured, and in planing mills,” where Baker worked, “the ratio was about 1 injury to every 14 employees.”⁴ In 1914, after visiting a number of lumber towns, P.A. Speak, an investigator for the U.S. Government’s Commission on Industrial Relations, recorded his own anecdotal impression of the extent of the injuries undergone in lumber production, complementing the statistical view of dangerous production. He wrote: “It is a striking thing in the lumber towns and cities in the vicinity of which the lumber industry is going

³ “Operative #5 reports,” June 1, 1911, f. 671, Louisiana Central Lumber Company papers (C3660), Western Historical Manuscript Collection – University of Missouri-Columbia (hereafter LCLC papers).

⁴ Max D. Kossoris and Frank S. McElroy, “Causes and Prevention of Accidents in Logging and Lumber Mills, 1940” *Monthly Labor Review* (December 1941): 1465.

on, to see the many crippled men, with missing leg, or hand, or fingers, among the people in the streets and in the places where people gather.”⁵

What makes this incident in Standard unique, then – aside from it having been recorded at all – is the person who wrote it down. The new worker was known in his writing only as Operative #5. Working for the Pinkerton National Detective Agency, this anecdote formed a part of a daily report #5 sent to his superiors. The presence of spies in the mills illustrated the challenge facing the industrial union movement led by the Brotherhood of Timber Workers: well-organized and powerful capitalists would fight back against efforts of their workforce to assert autonomy. Their reports, as the chronicle of fifteen year-old R. Baker’s injury suggests, also provide insight into the day-to-day social and spatial relations dominating lumber mills and towns. Furthermore, though mill owners might not have recognized it as they leafed through the reports of #5 and other operatives stationed in mills across Louisiana in 1911, these stories helped explain the rise of the very movement they were attempting to root out.

After 1880, the development of the lumber industry engendered substantial transformations in the social and ecological relations of the western and northern Louisiana hinterlands, and across the Sabine River, in east Texas. These changes could be seen in the development of the physical infrastructure necessary for the harvesting of timber and the production of lumber, as well as in the cutover lands that were left behind. Company towns, sawmills, logging camps, spur railroads, and mill ponds crisscrossed the pine forests of the region, and this complex collectively signaled the power of lumber corporations over both the people who populated and labored in these spaces and the forests from where their raw materials were extracted. This growth can be measured in

⁵ P.A. Speak, “Report on Conditions in Labor Camps,” CIR 13:0414, 47.

various ways. For example, whereas in 1880 the southern states produced 1.6 billion board feet (b.f.) annually, by 1912 (their peak year), 15.4 billion b.f. were cut from southern stands. A few years later, in 1919, the South accounted for 37 percent of all lumber cut in the U.S.⁶ As C. Vann Woodward pointed out in his classic, *Origins of the New South* (1951), “entering along with the railroads and joining with them in the profitable business, the Northern lumber syndicate sliced wide swaths through Southern forests,” with the value of the business growing in Louisiana from \$1,764,644 in 1880 to \$17,408,513 in 1900.⁷ By 1910, the industry employed over 300,000 workers in the South – more than twice as many workers as in cotton manufacture. And unlike in textile manufacture, black workers were integral to the production process, constituting as much as fifty percent of the workforce.⁸

As described in Chapter 1, this industry’s behavior in the South relied on the hegemony of lumber firms over federal and state land and forestry policy, as well as its limited successes in colluding to restrict output and raise prices. Despite the industry’s growth and firms’ power, the construction of this industrial complex in Louisiana was not defined by the simple, progressive reordering of social life imagined and dreamt about by New South boosters and Northern lumber capitalists. Instead, as I explore in this chapter, these firms faced a series of interrelated political and social challenges in their efforts to extract profit from the forests and the people of the region. An “unruly” labor force defined the first problem faced by these firms. Local tenant farmers and sharecroppers

⁶ Henry B. Steer, *Lumber Production in the United States, 1799-1946* (Washington D.C.: GPO, 1948), table 4.

⁷ C. Vann Woodward, *Origins of the New South, 1877-1913* (Baton Rouge: Louisiana State University Press, 1951), 118.

⁸ Gavin Wright, *Old South, New South: Revolutions in the Southern Economy Since the Civil War* (New York: Basic Books, 1986), 160, 179. On New South textile production and communities, see Jacquelyn Dowd Hall et al., *Like a Family: The Making of a Southern Cotton Mill World* (Chapel Hill: University of North Carolina Press, 2000).

formed the backbone of this local labor force, and during the early twentieth century many of them – and their sons – were pulled into the orbit of the sawmills (in addition to migrants from cotton producing areas of the South). Historian James R. Green has noted that, like many pre-industrial groups confronted for the first time with the rigors of a capitalist time and work-discipline, newly proletarianized lumber workers proved rebellious: “In the face of painful dislocations caused by rapid industrialization, these men clung to older traditions: a leisurely, agrarian attitude towards work and production, a grudging insistence on ‘squatters’ rights’ to the land, and ‘primitive’ respect for nature.”⁹ Though new to industrial labor these workers did, however, have some political experience and savvy. During the 1880s and 1890s, farmers in the region formed a potent source of, and constituency for, the populist movement.¹⁰ Lumber workers, with populist farmers by their side, cooperated and challenged lumber firms most notably from 1910 to 1914, in the form of the industrial union movement that swept through western Louisiana and eastern Texas. The Brotherhood of Timber Workers (BTW), which affiliated with the Industrial Workers of the World (IWW) in 1912, contested the hegemony of the lumber firms in and outside the mill and staked their claim as “free men.” The BTW politicized the day-to-day social conditions of logging and sawmill labor, as well as the conditions in

⁹ James R. Green, “The Brotherhood of Timber Workers 1910-1913: A Radical Response to Industrial Capitalism in the Southern U.S.A.,” *Past and Present* 60 (1973): 166. Scholarly and political interest in the process of (and responses to) proletarianization is an old theme in Marxism and working-class history. See Karl Marx, *Capital: A Critique of Political Economy*, vol. 1 (London: Penguin, 1981); E.P. Thompson, “Time, Work-Discipline, and Industrial Capitalism,” *Past & Present* 38 (1967): 56-97; and Herbert G. Gutman, “Work, Culture, and Society in Industrializing America, 1815-1919,” *The American Historical Review* 78, no. 3 (1973): 531-588. The best and most recent study of proletarianization in the Southern lumber industry is William P. Jones, *The Tribe of Black Ulysses: African American Lumber Workers in the Jim Crow South* (Urbana: University of Illinois Press, 2005).

¹⁰ Green also documented the longer political tradition of populism in his book *Grass Roots Socialism: Radical Movements in the Southwest, 1895-1943* (Baton Rouge: Louisiana University Press, 1978). On the democratic upsurge in the rural South during the 1880s and 1890s constituting the populist movement, see Lawrence Goodwyn, *The Populist Moment: A Short History of the Agrarian Revolt in America* (New York: Oxford University Press, 1978).

communities set in the timber-producing region. The lumber firms succeeded in quashing this movement only through a sustained effort that was coordinated for the firms by the Southern Lumber Operators' Association (SLOA). This employers' organization planned a lockout, developed and circulated a blacklist, and fomented violence against unionists in lumber towns. The SLOA was hardly unique in fighting off unionism in the lumber industry. On the west coast, IWW organizing drives resulted in some the most hard fought and iconic labor struggles of the period.¹¹

The second struggle of lumber firms was rooted in the race relations of the Jim Crow South. Unsurprisingly, lumber mill owners, managers, foreman, and workers were often deeply racist in their worldview, social practices, and use of language. More interesting and surprising to note, however, is that lumber mill managers and owners frequently clashed with their white workers on issues related to race. On the one hand, evidence from lumber companies reveals the way in which the firms served to protect black workers from the racist violence of white workers and local residents, if only to continue to exploit them in the mills and woods. On the other hand, when the BTW challenged lumber firms' hegemony with an interracial working class movement, the lumber operators responded by exploiting racial divisions between workers. Race was a category to be manipulated for the benefit of firms.

Describing the confrontations and manipulations around labor and race as “problems” for lumber firms suggests the way in which certain social and spatial conditions were politicized and made socially significant. To understand how or the extent to which firms “overcame” these problems, then, requires examinations of social

¹¹ On the IWW in the lumber industry, see Melvyn Dubofsky, *We Shall Be All: A History of the Industrial Workers of the World* (Chicago: Quadrangle, 1969); Robert L. Tyler, *Rebels of the Woods: The I.W.W. in the Pacific Northwest* (Eugene: University of Oregon Press, 1967).

relations in the lumber mills and woods and the system of Jim Crow in the spatial environments in which these relations played out. As I did in the preceding chapter on the labor of logging and lumber camps, I approach these developments by focusing on the *working environments* and *living environments* in (and over) which these struggles in lumber towns played out during the early decades of the twentieth century. Comprised of the material and spatial conditions and risks, as well as the set of social ideologies guiding the understanding of these spaces, the working environments of the mills and woods of the region formed specific spaces – at the point of production – where class power, race, and nature met. The company towns that were hastily built around the mills also constituted a context where social power and space created a specific living environment. In short, the company’s control over the “working environment” did not stop after workers passed the sawmill gates on their way home.¹²

I also argue that simply reporting on and documenting mill owners’ and white workers’ belief in the inferiority of African Americans is not the only, or even the most important task for historians of race relations in Louisiana. To note, however, that mill owners *learned* how to work within (read: exploit) the historically specific context of Jim Crow is significant. In other words, Jim Crow was an *institution* with rules and practices not obvious to the northern capitalists who invested in sawmills and redefined labor relations in the state. Lumber managers, my evidence suggests, *learned* – and then only haltingly – how to manipulate and benefit from this system. A “divide and rule” strategy, though often discussed as a self-evident behavior of capitalists, needed to be

¹² On the importance of thinking about class struggles as taking place both temporally and spatially, see Edward W. Soja, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory* (London: Verso, 1989); and Andrew Herod, “Workers, Space, and Labor Geography,” *International Labor and Working-Class History* 64 (2003): 112-138.

“discovered” by mill owners and could also mean different relationships at different times. The contours of Jim Crow did not always offer obvious ways for firms to behave, and observing the conflicts between mill owners, white workers, and African Americans, demonstrates both the power of mill owners to manipulate race, but also white and black workers to confound the demands of the firms. This occurred not only in the inspiring interracial union organizing campaign of the BTW, but also in the significantly less admirable actions of white workers to intimidate black workers.

Available sources obviously play a central role in structuring not only what histories can be told, but also the way in which they are written. This chapter is no different. It relies heavily on sources produced by superintendents, managers, and the presidents of lumber firms; the spies they hired to keep tabs on workers in their mills; and the outside observers – journalists and government investigators – of the “sawmill world” in Louisiana. Unlike my exploration of labor in the woods of Minnesota (see Chapter 3), there are almost no oral histories with lumber workers in Louisiana describing their experiences. Still, the lumber managers, spies, and outsiders who did write about what went on in the mills and towns could not help but comment on (and shape) issues related to working environments and race. The control over both workplace and living spaces by lumber firms that was evident in both Minnesota and Louisiana, though a bane to many of the workers, proves to be an asset to historians. In particular, the amazingly complete records of the Louisiana Central Lumber Company offer a unique and powerful window into the history of the industry in the state.¹³ Much can be learned about the sawmill world and workers’ lives through tracing these records and others carefully. The bulk of

¹³ For a local history of the Louisiana Central Lumber Company, see William T. Childers, *Echoes from the Millpond: A Brief History of the Louisiana Central Lumber Company, Clarks, Louisiana, 1902-1953* (Columbia, La.: The Caldwell Parish Library, 1987).

the correspondence and reports of the lumber firms and spies center around the overt political-economic fight between the BTW and the SLOA, but many of these records – produced to influence the outcome(s) of this conflict – can also tell us about the more mundane, day-to-day forces at work in the lumber towns throughout the period under study. The union–industry conflict, then, gives us an opportunity to examine the forces and conditions at work in the industry not only in the contentious 1910-1914 period, but throughout the era of the lumber industry’s dominance of the “sawmill world.”¹⁴

Furthermore, the themes I explore in this chapter help elucidate the conditions that generated such radical outpourings of workers’ discontent. My central claims do not lie in a reevaluation of the political-institutional history of the BTW–SLOA conflict per se, as this is a well told and documented story in other historical literature. Nevertheless, because many of the sources that shed light on the day-to-day operations in the mill towns were produced in the context of this struggle, this chapter begins with a short history of the major developments of 1910-1914. A review of this conflict also demonstrates how the issues of working and living environments, and race, with which I

¹⁴ The “Louisiana Timber War” received significant attention from the very moment the events unfolded, from Covington Hall who edited *The Lumberjack* and *The Voice of the People*, and later in his *Labor Struggles in the Deep South and Other Writings*, ed. David R. Roediger (Chicago: Charles H. Kerr Publishing Company, 1999). In the 1970s, the New Labor History brought renewed interest to the struggle, especially given its evidence of interracial cooperation among some lumber workers and their Wobbly affiliations. These studies offer important understandings of the political origins of the timber workers’ movement, as well as excellent narratives of the struggle itself, but do not, I argue, capture the spatial-environmental conditions of the “sawmill world.” See Green, “The Brotherhood of Timber Workers 1910-1913”: 161-200; Jeff Ferrell and Kevin Ryan, “The Brotherhood of Timber Workers and the Southern Trust: Legal Repression and Worker Response,” *Radical America* 19, no. 4 (1985): 55-74; James E. Fickle, “Race, Class, and Radicalism: Wobblies in the Southern Lumber Industry, 1900-1916,” in *At the Point of Production: The Local History of the I.W.W.*, ed. Joseph R. Conlin (Westport, CT: Greenwood Press, 1981), 97-113; Grady McWhiney, “Louisiana Socialists in the Early Twentieth Century: A Study in Rustic Radicalism,” *Journal of Southern History* 20, no. 3 (1954): 315-336; Merl E. Reed, “Lumberjacks and Longshoremen: The I.W.W. in Louisiana,” *Labor History* 13, no. 1 (1972): 41-59. Geoffrey Ferrell’s study does provide some discussion of the shop floor, accidents, and terrible working conditions, but sees them mostly through the lens of an “alienating” (in the Marxist sense) factor in the building of the movement. See his “The Brotherhood of Timber Workers and the Southern Lumber Trust, 1910-1914” (Ph.D. diss., University of Texas-Austin, 1982).

am primarily concerned, were politicized.

I. The Brotherhood of Timber Workers and the Southern Lumber Operators' Association

Unsurprisingly, the lumber worker radicalism of the 1910-1914 period had antecedents. Aside from the populist organizing of the 1880s and 1890s, a series of small, decentralized strikes in 1902 and 1907 showed managers and fellow lumber workers that some workers were willing to challenge the mill owners on pay, hours, and living conditions. Additionally, though Jim Crow restricted the extent of voting for African Americans and poor whites, BTW newspaper editor Covington Hall noted in *Labor Struggles in the Deep South* that the Socialist Party still received significant support from the lumber producing regions of Louisiana in the elections of 1908 and 1912. In 1907, the “spontaneous” strikes came after mill owners enacted a twenty percent wage cut in the midst of that year’s economic crisis. While the strikes resulted in promises by mill owners to return wages to higher levels once prosperity returned, they left no organizational structures in their wake to channel workers’ discontent, thereby returning many of the prerogatives of power to mill owners. In fact, aside from the establishment of a small IWW-inspired newspaper, *The Leesville Toiler*, which opened in 1908 in Leesville, Louisiana and persisted through at least 1913, the most enduring legacy of the 1907 strikes was the organization of the *capitalists* in the southern woods: in the wake of this rebellion, lumber firms created the Southern Lumber Operators’ Association (SLOA), the institution that made the later BTW efforts to organize the mills and woods so difficult.¹⁵

¹⁵ Hall, *Labor Struggles in the Deep South*, 120; McWhiney, “Louisiana Socialists in the early Twentieth Century,” 325-327; Green, “The Brotherhood of Timber Workers 1910-1913,” 175. The SLOA existed

In December 1910, a meeting in the lumber town of Carson, Louisiana between organizers Arthur L. Emerson, Jay Rice, and local workers resulted in the formation of the first local in a new union in the lumber mills and woods of western Louisiana and east Texas.¹⁶ During the spring of 1911, organizers for the new Brotherhood of Timber Workers fanned out across the lumber towns and camps of the region, spreading the word of the organization and its mission to organize *all* lumber workers, regardless of race or job classification. Before its first convention, in May 1911, the BTW's organizers articulated its intent to "establish our industrial freedom" as they rallied support among lumber workers. The BTW put forward five aims defining its vision of "industrial freedom":

First, To retain our present conditions so as to prevent further encroachment on our rights as free men.

Second, To, if possible, raise our wages.

Third, To demand our right to trade when and where we please, and a cash value on our coupons or checks drawn from our employers.

Fourth, A removal of all compulsory charges made against us, such as DOCTOR BILLS, INSURANCE and HOSPITAL FEES.

Fifth, In general to demand all things that tend to our rights as honest men, so we can be considered once more as free men, and have a chance to raise our families respectably; so we can be looked upon as respectable men and women, not slaves. At present we are no more than their slaves. We come and go at their bidding. Our freedom of speech and trade are taken from us.¹⁷

The demands challenged mill owners on several fronts. They drew a stark comparison between their own condition and that of slavery – purged fewer than fifty years earlier from the South – and loosely defined their "industrial freedom" around the elimination of

separately but closely coordinated with the Yellow Pine Manufacturers Association. The SLOA existed solely to prevent unionization among lumber workers, while the YPMA was engaged in a number of trade association functions, especially the issuing of price lists (as discussed in Chapter 1). See James E. Fickle, *The New South and the "New Competition": Trade Association Development in the Southern Pine Industry* (Urbana: University of Illinois Press, 1980), 21-22.

¹⁶ For a helpful chronology of the BTW—SLOA conflict see Ferrell, "The Brotherhood of Timber Workers and the Southern Lumber Trust, 1910-1914," 94-122.

¹⁷ "Resolutions of the Brotherhood of Timber Workers," May 1911, f. 668, LCLC papers.

fees, the regular cash payment of wages, and the right to shop beyond the company store. Though concerned with economic issues, like many outpourings of labor discontent in American history, the BTW's demands were non-economistic in their orientation. In other words, though their specific demands centered around material goods, the fulfillment of these demands would have substantially reshaped social relations in the company towns and the mills.

As in other industries based on company towns, lumber firms in southern Louisiana typically paid their workers in "scrip," or currency only redeemable at the company store. Though company stores existed in Minnesota as well, the seasonal nature of logging, for instance, meant that loggers were not permanently dependent on the same firm and they were paid in cash at the end of the logging season. In Louisiana, by contrast, the use of company scrip permitted firms to both charge higher prices at their stores, and allowed them to generate profits off of workers' consumption as well as production. In Charlotte Todes' 1931 exposé of conditions in the lumber industry, she wrote of this relationship, "Operators paying 'scrip' force purchases in the company stores to retain part or all of the money earned by the worker. In this way they run their operations without expending the capital necessary for wage payments and make additional profits for the purchases of the workers, who cannot use the 'scrip' elsewhere."¹⁸ This system also formed part of lumber firms' spatial domination of the living environment (considered in the last section of this chapter) and fostered the ire, not only of lumber workers, but also small shopkeepers in the lumber region, whose business was undercut by companies' payment in scrip. Some shopkeepers, though, might sell goods to lumber workers after discounting the scrip by five or ten percent. P.A. Speek, an investigator for the Commission on Industrial

¹⁸ Charlotte Todes, *Labor and Lumber* (New York: International Publishers, 1931), 106.

Relations, noted that in southern lumber towns, “There is very little cash money in circulation ... the merchandise checks serve as currency.”¹⁹

By the time that the BTW codified its mission at its convention, lumber mill owners in the region had already set in motion a plan to stop the union movement in its tracks and ensure the loyalty of its workforce. The SLOA stood ready to coordinate their efforts. At the start of the conflict, in 1911, the organization was comprised of fifty lumber firms in Louisiana, twenty-two in Arkansas, sixteen in Texas, and a handful in the other Gulf States. Through daily circulars to lumber firms, frequent meetings of its executive committee, and periodic discussions among its larger membership, it charted a course to undermine the message of the union.²⁰ First, in an effort to combat individuals who, according to Louisiana Long Leaf Lumber Company (LLLLC) manager W.W. Warren, were “troublemakers” for the industry, firms unleashed operatives of the Pinkerton National Detective Agency into the mill towns and lumber camps in the “infected area.” The Pinkertons were charged with learning the extent of the lumber workers’ organizing, because “agitators and organizers certainly worked quietly.”²¹ The Louisiana Central Lumber Company, for example, had operatives (including the aforementioned operative #5) in both of the sawmill towns it ran (Clarks and Standard, Louisiana) during May and June of 1911, and again in October. The company again used spies as a tactic for labor suppression and surveillance, years after it defeated the BTW, in the fall of 1916. Second, firms asked their workers to sign anti-union cards and began

¹⁹ P.A. Speak, “Report on Conditions in Labor Camps,” CIR 13:0414, 78.

²⁰ “Membership List, SLOA,” September 1911 f. 693, LCLC papers.

²¹ W.W. Warren, personal letter to C.E. Slagle, April 10, 1911, f. 660, LCLC papers. “Infected area” was a term used often by lumber mill owners and managers to describe the mills and region where union activity was heaviest. On the history of labor spies in American history, see Leo Huberman, *The Labor Spy Racket* (New York: Modern Age Books, 1937); and Frank Morn, *“The Eye That Never Sleeps”: A History of the Pinkerton National Detective Agency* (Bloomington: Indiana University Press, 1982).

keeping track of the applications of workers for employment at each firm using an SLOA designed and standardized form, the infrastructure necessary for the creation of the blacklist, a tool which it used with much effect throughout the struggle.

At the same moment that spies entered the mills and workers signed anti-union cards in late May 1911, at the suggestion of the SLOA companies also reduced the work week to four days in order to reduce wages so that workers would not be able to fund the BTW. As C.C. Shepard, the Sales Manager at the Missouri Lumber and Land Exchange, explained to the managers of its subsidiary mills in Louisiana (including LLLC and LCLC), “This reduction in running time should give the men less money to contribute towards the organization [the BTW], and would be an effective method of shutting off the further organization of the men.”²² Essentially, they sought to starve the union. This approach, however, may have further inspired interest in the union among lumber workers, as the move only underscored the despotism of mill owners and the need for workers to have more say in the conduct of the industry. If it did not directly produce good, class-conscious workers for the union movement, it did certainly at least foster apolitical resentment among sawmill workers. One Pinkerton operative recorded a worker who “stated he thought it a g-d-m shame for this company to cut the mill down to four days a week. That he had it in his mind to leave this g-d-m place and leave such g-d-m cheap companies alone and quit saw milling and go back to farming. That now he would spend more money by running to Monroe [Louisiana] and spending his money for beer and whiskey and would be drunk more often than he is.”²³ In addition to this

²² C.C. Sheppard, letter to C.E. Slagle, W.W. Warren, and J.H. Hahn, May 10, 1911, f. 666, LCLC papers.

²³ Operative #11 reports, June 1, 1911, f. 671, LCLC papers. Especially given the paucity of oral histories, and sources generally, from the perspective of labor in the southern lumber industry during the first decades of the twentieth century, these spy reports constitute important windows onto the shop floor.

sawyer's resentment of the firm, his statement also points to the real or imagined fluidity between industrial proletarians and tenant farmers in the region.

Throughout the conflict, lumber workers received support from local farmers. One report from the SLOA described the composition of a BTW meeting at Leesville, Louisiana as being comprised of "123 members present and five visitors, 58 negroes, 6 Italians, 64 whites, of which 27 were farmers and outsiders and 37 were mill men from Stables, Hawthorn, and Merryville."²⁴ More generally, Alexander described the BTW's constituency as "a conglomeration of mill men, farmers, merchants, Mexicans, Dagoes and negroes but at no time have more than 40 or 50 per cent been actual mill workers, and we find that already dissention is becoming rife in their ranks; the question of social equality is being fostered and agitated."²⁵ The BTW's diverse makeup gave it considerable strength, but also opened it up to charges from Alexander and SLOA that these non-white or non-American workers sought to subvert the southern social order.

As the summer of 1911 progressed, intimidation tactics by individual mill owners and the construction of a blacklist by the SLOA had not slowed the growth of the union. In September, the SLOA estimated the union's strength at 9,500 members, including "five to six thousand ... reported to be negroes."²⁶ In August, the executive committee of the SLOA voted to close any mill where there was any union sentiment or presence among the employees as a way to keep the union from gaining a foothold. More than simply a lockout, however, the SLOA developed its own strike fund, what it called the "Benefit Trust Fund," requiring the mills remaining open to pay a twenty-five cents per

²⁴ M.L. Alexander, letter to M.L. Fleishel and SLOA executive committee, November 18, 1911, f. 707, LCLC papers.

²⁵ M.L. Alexander, letter to SLOA membership, November 25, 1911, f. 712, LCLC papers.

²⁶ M.L. Alexander, to M.L. Fleishel and SLOA exec. comm., September 7, 1911, f. 693, LCLC papers.

one thousand foot tax on milled lumber (raised to fifty cents in September 1911).²⁷ This money would then be distributed to the mills that were “closed down until such time as they can be operated with labor which is not subservient to or in sympathy with the Brotherhood of Timber Workers.” By August 22, 1911, twenty-two lumber mills had ceased operation under the SLOA plan, and by October about forty major mills were shuttered.²⁸ W.W. Warren, general manager at the LLLC, wrote to company president J.B. White in September 1911, describing the situation at its Fisher mill after the SLOA decision to close “infected” mills:

So far as we are concerned here at Fisher we have no union men in town, with possibly one or two exceptions. The union is composed entirely of farmers and farmers sons, that have worked for us. The other men that joined the union here have left the country. ... While I think it would be inadvisable, at the same time I think we could start part of our mill most any time it was thought best, but I think we ought all to stay down for some time yet so that the impression made by closing can sink in good and deep. The Louisiana farmer is queer proposition, and no doubt it gives him no little pleasure to think he is having something to do with closing down the big saw mills.²⁹

Again suggesting the fluidity between the category of “farmer” and “worker,” Warren’s remarks also pointed to the difficulty – despite the anti-union pledges, blacklist, and labor spies – in knowing if the mills were truly free of union organizing.

The content of the daily reports from secretary M.L. Alexander to the SLOA membership during the fall vacillated in tone, from abject fear and despair that the union menace would continue unabated to confidence that owners would prevail over the union quickly. His reports regarded unionism as a pathology and also revealed the variable,

²⁷ “Minutes of the General Meeting of the SLOA,” August 16, 1911, f. 688, LCLC papers.

²⁸ SLOA to members, August 22, 1911, f. 689, LCLC papers; SLOA to members, “re: assessment on August production,” September 19, 1911, f. 696, LCLC papers; Ferrell, “The Brotherhood of Timber Workers and the Southern Lumber Trust,” 102-103.

²⁹ W.W. Warren, personal letter to J.B. White, September 14, 1911, Louisiana Long Leaf Lumber Company records, 8976 (Box 84), Louisiana State Archives.

local nature of the struggle. One report, for example, suggested that “Clarks, the plant of the Louisiana Central Lumber Company, was practically clear of infection and that there was little or no infection at Standard,” while two days later it reported that DeRidder, Louisiana had over 1,300 members. And though the same report argued that Clarks had only four members, less than thirty miles away, in Winnfield, Louisiana, the SLOA argued the BTW had 72 members.³⁰ Still, by early November, M.L. Alexander declared to the executive committee, “As far as the Louisiana situation is considered, I cannot help but feel that we are gaining ground slowly but surely and getting the upper hand of the situation and if we can but feel assured that the organization will not be allowed to spread into the territory East of the river and in Arkansas, I believe that a matter of sixty days will practically mean its finish.”³¹ With this interpretation sharing some consensus among the SLOA leadership, beginning in November 1911, the lumber firms began slowly reopening the mills while keeping a careful eye on the blacklist and anti-union cards, and continuing to employ spies in their plants.

Though Alexander was misguided in his belief that the union movement could be killed in sixty days, after the initial organizing drive of the BTW and the simultaneous lockout initiated by the SLOA during 1911, the conflict between the workers and capitalists in the Louisiana and Texas woods entered a prolonged stalemate defined by the reopening of the mills, but not the quick death of the union. Revising his opinion of its imminent “finish,” M.L. Alexander wrote at the end of 1911, “we have every reason to

³⁰ M.L. Alexander, letter to M.L. Fleishel and Executive Committee, September 19 and 21, 1911, f. 696, LCLC papers.

³¹ M.L. Alexander, letter to M.L. Fleishel and Executive Committee, November 4, 1911, f. 706, LCLC papers.

believe that they [the BTW] are going to continue this fight for some time to come.”³²

Prophetic in his second statement on the future of the union, Alexander proved correct in his sense that the struggle would continue. Two years later, by the end of 1913, however, the most serious challenge to capitalism in the south by working people was moribund. Like capitalism itself, this insurgent movement could not survive without continual growth.

Three events shaped the union’s fortunes during 1912 and 1913. First, the BTW began the process of affiliating with the Industrial Workers of the World (IWW) during the spring of 1912. The BTW had apparently begun discussions with the IWW in the fall of 1911 in the hopes that the affiliation would help slow the employers’ impressive pushback against the union. At the BTW’s second annual convention held in Alexandria in May 1912, IWW leader William D. “Big Bill” Haywood and writer and speaker Covington Hall attended. At the end of the three day conference, the BTW voted to affiliate with the IWW.

Second, only weeks after the affiliation with the IWW, the most violent incident of the “Lumber War” occurred in Grabow, Louisiana. In the midst of a campaign centered on the union stronghold of DeRidder, in western Louisiana, union president Arthur Emerson spoke to a crowd on a public highway outside the gates of the Galloway Lumber Company mill in Grabow (also sometimes written as Graybow) on July 7. In the middle of a speech to workers and their families, a gun battle broke out between armed company guards and some union supporters, an exchange that over the following ten

³² M.L. Alexander, letter to SLOA membership, December 30, 1911, f. 722, LCLC papers.

minutes claimed four lives and injured forty.³³ Though M.L. Alexander declared the following day in a letter to the SLOA executive committee that “we ... understand that the hostilities were brought on by the Union forces who were distinctly the aggressors,” the union, not surprisingly, identified drunken guards as the initial perpetrators.³⁴ In the wake of “the riot,” a grand jury at Lake Charles, Louisiana found the leaders of the union and its sympathizers responsible for the events in Grabow, indicting sixty-five unionists for murder and clearing the company guards.³⁵ The trial, held in Lake Charles during the fall of 1912, eventually acquitted all the defendants of crimes connected to the Grabow incident. The BTW publicized the trial – what it called the “Grabow ‘Conspiracy’” – widely, and Hall wrote extensively about the proceedings in fliers and in the socialist press. The outcome of the trial marked an important victory for the union, but given that much of its leadership and energy sat in jail for most of the summer and fall, while other unionists spent their time attempting to get these leaders out, the aftermath of the Grabow incident may also have weakened the movement.³⁶

Shortly after the acquittal of the BTW’s union leadership, in November 1912, workers went on strike at the American Lumber Company in Merryville, Louisiana. While the solidarity of the workers and their families was impressive, the action resulted in the almost immediate use of strikebreakers. In February 1913, a crowd of company gunmen and local citizens in Merryville led an attack on the union members remaining in

³³ Fickle, “Race, Class, and Radicalism,” 107. On the “Grabow riot” see also, Keagan LeJeune, *Always for the Underdog: Leather Britches Smith and the Grabow War* (Denton: University of North Texas Press, 2010).

³⁴ M.L. Alexander, letter to SLOA executive committee, f. 773, July 8, 1912, LCLC papers.

³⁵ Fickle, “Race, Class and Radicalism,” 107.

³⁶ The channeling of IWW activism at the point of production into legal challenges was common in the organization’s history, and Progressive Era radical movements, generally. On the IWW’s “free speech fights” see Dubofsky, *We Shall Be All*, 173-197; and Ernest Freeberg, *Democracy’s Prisoner: Eugene V. Debs, the Great War, and the Right to Dissent* (Cambridge: Harvard University Press, 2008).

Merryville, running many of them out of the town and virtually ending the strike. In April 1913, union president Arthur Emerson was assaulted by a crowd, and he resigned his post in the summer. Though facing increasing difficulties in this period, the union finally succeeded in getting a weekly, four-page newspaper off the ground. Published from Alexandria, and edited by Covington Hall, *The Lumberjack* began its run in January 1913. After the official end of the Merryville strike in June, *The Lumberjack* moved to New Orleans and broadened its content in the hopes of increasing its readership, a change reflected in the paper's new name: *The Voice of the People*. The end of the Merryville strike and the newspaper's move reflected the decline of the lumber workers' movement. A couple of small strikes took place during the fall of 1913, but by early 1914 the BTW–IWW effort in the lumber mills of Louisiana was effectively dead.³⁷

Though the BTW was ultimately squashed by the intense pressure coordinated by the Southern Lumber Operators Association through the use of spies, the blacklist, prolonged lockouts, and overt violence, its alternate vision of industrial life was rooted in a “sawmill world” that presented injustices both on and off the job. Memories of populism and their first confrontation with the rigors of industrial labor provide a partial set of explanations for the development of a radical class conscious movement in the Louisiana lumber industry, but on the job conditions – accidents, racial violence, and long hours in the mill, as well as a lack of autonomy in the towns – provided a set of circumstances with which counter-hegemonic political and economic ideologies resonated. The spatial configuration of the mills and the lumber towns were not simply

³⁷ An American Federation of Labor affiliated union – the International Union of Timber Workers – attempted to organize both black and white workers at the Great Southern Lumber Company in Bogalusa, Louisiana at the end of World War I. This drive was also violently crushed. See Stephen H. Norwood, “Bogalusa Burning: The War Against Biracial Unionism in the Deep South, 1919,” *The Journal of Southern History* 63, no. 3 (1997): 591–628.

stages where these social struggles played out, but mechanisms through which class discipline and capitalist power were both exercised and challenged.

II. Working Environments

In contrast to most other manufacturing plants, what happens inside sawmills is not a process of assembly, but rather disassembly. And though lumber certainly qualifies as a “mass production” industry, the lumber produced in one mill included a range of products in a variety of sizes: dimensional, veneer, rough-hewn or finished. In the large, steam-powered southern mills being constructed in the 1890s and 1900s, logs typically entered the second floor of a sawmill, moved in on an incline by the “bull chain” from the millpond where logs delivered by rail were stored. After arriving on this conveyor system, the log would be cut by the “head saw,” usually a vertically positioned band saw, and through a rotation of the log between cuts, it was shaped into a rectangular “cant.” From there, assemblies of “gang saws” and “resaws” would be used to work the cant into a variety of dimensional lumber as required by the firm. These operations depended on a network of fast-moving belts running through the mill, transferring power from the steam-powered boilers (fed by wood waste). After being sawn into rough-hewn boards, this lumber needed to be “seasoned” (dried) in either the mill’s lumberyard or in a “dry kiln,” which artificially heated lumber by also using waste energy from the steam production. After seasoning, lumber could either be loaded onto rail cars for shipment or be moved to the planing mill where it could be planed or turned into moulding.³⁸

Work in these early twentieth century lumber mills was dangerous (as it remains

³⁸ Ralph Clement Bryant, *Lumber: Its Manufacture and Distribution* (New York: John Wiley & Sons, 1922).

to this day), both in absolute terms and relative to other occupations. Still, the working environment that led to Baker's injury in the planing mill in the anecdote that began this chapter was not defined by an unchangeable set of risks inherent in lumber production, but a set of technological developments and an ideology of economic growth with little respect to its social cost, as well as with a more general social understanding of risk and safety. In other words, these spaces were constructed by humans in physical and social ways that left workers exposed to danger. Further, as economist and historian Mark Aldrich notes in his study, *Safety First: Technology, Labor, and Business in the Building of American Work Safety, 1870-1939* (1997), at the turn of the twentieth century work accidents were most frequently interpreted by firms, the law, and the public as "routine matters of individual carelessness" rather than a gross oversight of management as it is commonly understood today in our post-Occupational Safety and Health Administration era.³⁹

The social construction of this on-the-job risk is clear in a recollection of one retired lumber mill worker, James Ellis. He recounted in an oral history interview the grisly death of a fellow worker as he lubricated the belts and pulleys that made the steam-driven lumber mills operate:

I seen another man, he was a oiler at a sawmill. He greased them pullies and them ... all that stuff under the mill, there, he'd keep it oiled up, you know, and runnin' ... And he was down there, couldn't do nothing much else, oilin' them cars, and he got tangled up in that belt, in them pullies, and it whupped 'im to death, there; and he was goin' down elevator chains, goin' out to the flour pit [a sawdust refuse pile], if it could have been just ten minutes longer, couldn't of found him, he'd a been in that flour. And the sawyer saw him, and blowed the whistle and stopped.⁴⁰

³⁹ Mark Aldrich, *Safety First: Technology, Labor, and Business in the Building of American Work Safety, 1870-1939* (Baltimore: Johns Hopkins University Press, 1997), 3.

⁴⁰ James Ellis, quoted in Ferrell, "The Brotherhood of Timber Workers and the Southern Lumber Trust, 1910-1914," 175.

Belts without guards, in Ellis's telling, caused the death of his fellow worker.

Firms and workers did not always unconsciously accept the status quo of workplace risk, but struggled (however unevenly) over the conditions of the workplace environment in ways that combined physical risk and social ideology. In 1903, for example, one of the sawyers at LCLC's Clarks, Louisiana plant was injured after a wood plank jumped off a carriage while he was resetting the machine for his next cut. Typically, the sawed portion of a log would be put on rollers by "doggers" who were assisting the sawyer, but in this case, the sawyer reversed the machine (the carriage) before the dogger could grab the plank. C.E. Slagle, general manager at LCLC, described that after nicking the saw, "the back end of the plank ... caught him above the knee, pinioning his leg against the deck, badly bruising the same."⁴¹ Even almost 40 years later, the sawyer's injury would have been common; Labor Department investigators calculated that a worker being "struck by" or "struck against" a piece of machinery or lumber caused 45 percent of sawmill accidents.⁴²

In the wake of the accident, the sawyer suggested that a beam be placed in between the saw and the sawyer, thus preventing planks from kicking out from the carriage and injuring the operator. LCLC installed the beam, but in a letter to LCLC's attorneys in Monroe, Louisiana (Stubbs & Russell), Slagle commented that it was "an unusual precaution among Sawmill men [*sic*]. In fact, I do not know of another case where the Sawyer is thus protected, nor is it necessary where the proper care is exercised." Slagle had contacted the attorneys after the injured sawyer requested his full wages for the time he missed on the job while recovering from the injury. Worried that

⁴¹ C.E. Slagle, letter to Stubbs & Russell, October 22, 1903, f. 107, LCLC papers. See Kossoris and McElroy, "Causes and Prevention of Accidents in Logging and Lumber Mills, 1940": 1468.

⁴² Kossoris and McElroy, "Causes and Prevention of Accidents in Logging and Lumber Mills, 1940": 1465.

the sawyer might also take legal action against the firm, Slagle wrote, “We do not think we are liable for the accident, but we have been wondering if the placing of this 4 x 12 timber to protect the sawyer would work against us in case of a lawsuit.” In response, Stubbs & Russell agreed that LCLC was not liable for the accident, but chastised them for allowing protection to be installed after the accident, as it was “practically an admission on your part that this precaution should have been taken before the accident in question.”⁴³ The law firm argued “it is always wisdom to settle for a reasonable sum, even where there is absolutely no liability.”⁴⁴

The injury was apparently a serious one, and the company doctor did not foresee that the sawyer would be able to return to work for a number of months, and Slagle proposed letting him run the hotel in Clarks while he healed. J.B. White, president of LCLC, disagreed: “I am inclined to think that he would be a disturbing element to have around as he appears to think that corporations should pay pretty heavily, and has doubtless talked it over with others.”⁴⁵ Though the ultimate fate of the sawyer is unknown, the correspondence produced in the wake of this accident reveals the extent to which the physical danger of the mill was defined by the management’s ideological and cultural understandings of responsibility.

Injuries could be gruesome or deadly, as in the case of P.A. Speek’s account of the missing appendages in the lumber towns, or in Ellis’s recollection of the oiler’s death, but even seemingly modest injuries could be dangerous and painful in an era before antibiotics and local anesthesia. In a bit of bad luck that would have likely given some Brotherhood of Timber Workers members the warm sensation of *schadenfreude*,

⁴³ Stubbs & Russell, letter to C.E. Slagle, October 24, 1903, f. 107, LCLC papers.

⁴⁴ Ibid.

⁴⁵ J.B. White, letter to C.E. Slagle, November 2, 1903, f. 108, LCLC papers.

Operative #5, the man who recorded R. Baker's injury in the planing mill of the LCLC (the scene which opened this chapter), himself suffered a minor injury in early June 1911 while working in the mill. On the sixth of June he reported that he went to the doctor's office to have him look at the splinter "I had run ... in my right hand." Nine days later, however, the sliver of wood remained in Operative #5's hand and he returned to the doctor in Standard. He reported to his superiors: "I went to the doctor's office this morning and had Dr. Furgerson again try to get a splinter out of my right hand. After about a half hour's work he did pull one out about an inch in length. It had located pretty deep and required some cutting to get at."⁴⁶ The mundane quality of this injury, but also its discomfort, suggests the range of risks in the workplace environment.

Lumber firms had developed a system to cope with the staggering and often horrific injuries produced in lumber mills. As in Minnesota, they deducted wages from workers' earnings to provide for hospital care, though workers often considered this inadequate. During the BTW's campaign in Louisiana, Covington Hall, the organizer, chronicler, and editor for the union's newspaper, noted this mix of physical danger and social relations in the industry in his oft-cited *Labor Struggles in the Deep South*. Writing as an older man in the 1940s, Hall's work recounted that workers in the BTW were seeking relief from the insurance and hospital fees deducted from their wages, from which they did not receive any recompense. He recalled: "[T]here was not a single hospital maintained in any lumber town, and conductors on the Kansas City Southern and lumber railroads were forbidden to carry badly injured men to hospitals in Lake Charles and Shreveport, for fear that lawyers might contact them, and the companies face heavy suits for personal injury damages." Hall credited the witnessing of an incident of a

⁴⁶ "Operative #5 reports," June 6, 1911, f. 672; June 15, 1911, f. 674, LCLC papers.

“conductor trying to pull a badly injured man off a train” as the event that brought the editor of the influential socialist newspaper, *The National Rip-Saw*, Kate Richards O’Hare, to the side of the timber workers.⁴⁷ As with the example of the sawyer at the Louisiana Central Lumber Company, Hall’s account suggests the extent to which the lumber environment was defined by a set of physical risks that could be accentuated by the social and legal context, as well as the desire of firms to avoid legal responsibility.

Workplace compensation laws developed slowly and one state at a time during the Progressive Era, with most state laws defining the obligations of employers to remunerate employees after a workplace injury being passed between 1910 and 1920. In Louisiana, a general workers’ compensation law was passed in 1914. These laws replaced a negligence liability system in which a worker would have to prove that his or her employer’s negligence, in violation of the common law duty of providing a safe workplace, was the source of a workplace injury. This exact system played out in the aforementioned struggle between the sawyer and the LCLC in 1903. The negligence liability system came to a “compensation crisis” in the early part of the twentieth century, as workers in dangerous industrial sectors of the economy and their allies were able to extract at least some monetary benefits from courts.⁴⁸ Charlotte Todes argued, “Employers energetically oppose the enactment of compensation laws and the improvement of the laws to provide increased payments. They put every obstacle in the way of workers to keep them from receiving their compensation insurance even when the law grants it.” Historians writing about the enactment of workplace compensation laws,

⁴⁷ Hall, *Labor Struggles in the Deep South*, 125-6.

⁴⁸ Anthony Bale, “America’s First Compensation Crisis: Conflict over the Value and Meaning of Workplace Injuries under Employers’ Liability System,” in *Dying for Work: Workers’ Safety and Health in Twentieth-Century America*, eds. David Rosner and Gerald Markowitz (Bloomington: Indiana University Press, 1989), 34-52.

however, note at least mild support for such acts by at least some employers (particularly large, corporate organized firms) because it reduced uncertainty and court costs, as well as conflict with workers.⁴⁹ It is also possible that employers were able to pass on the cost of workplace compensation to their workers in the form of lower wages (as their “risk premium” evaporated), though I see no such evidence in the Louisiana lumber industry.

In addition to the problems with workplace safety that defined the lumber working environment, disease also shaped the spaces in which workers labored. George Tibbits, a migrant lumber worker employed at the Ruddock Cypress Company in southern Louisiana wrote in the summer of 1898 to his brother in-law Charles Wright in Virginia, describing his illness and his desire to leave the cypress swamps:

I have been down with fever for the last four days and it seems as though it was a year. ... Arthur has the fever also. He and ____ are going home Saturday on excursion rates viz \$12 round trip from here to Chicago and return. I do not know if they will come back or not. I advised Arthur not to if he could get anything to do at all. I think that fully one half of the people here are sick and the other half ought to be. ... I shall leave here as soon as I can find something else to do.⁵⁰

Apparently Tibbits was unable to leave the southern cypress industry, and wrote to his brother in-law again in October:

I would be willing to give most anything a trial in order to get out of this place. Nearly everybody is sick with chills and fever and we are shut up as tight as a bottle by the quarantine. Can't go anywhere except it is clear north of the Ohio River. You cant even open a car window for danger of being shot by the guards. There is lots of fever all around us but none dangerously near. ____ is sick and so is Asa. George Wood had been but is better. Arthur and I are feeling pretty well but we cant tell how long it will last. Yesterday I weighed 140 ½ lbs. Arthur

⁴⁹ Todes, *Labor and Lumber*, 140; Price V. Fishback and Shawn Everett Kantor, *A Prelude to the Welfare State: The Origins of Workers' Compensation* (Chicago: University of Chicago Press, 2000), 112-113. Donald Rogers has documented the diversity of state workers' compensation and safe workplace laws in the U.S. during the progressive era. In his case study, Alabama stands in as the typical southern state with a workers' compensation law, but no state institutions were in place to ensure protection at the workplace. Louisiana seems to have followed a similar course. See his *Making Capitalism Safe: Work Safety and Health Regulation in America, 1880-1940* (Urbana: University of Illinois Press, 2009).

⁵⁰ George Tibbits, personal letter to Charles Wright, August 18, 1898, Charles L. Wright papers, Louisiana and Lower Mississippi Valley Collection, Louisiana State University library (hereafter LSU library).

is like a match and everybody is as yellow as a saffron.⁵¹

Especially given the alarm about the fever described by Tibbits and a known epidemic in that year, it seems likely that the disease he suffered from and commented on in 1898 was yellow fever, a mosquito born disease with a long and deadly history across tropical and sub-tropical regions of the world. Since cold weather kills the mosquito (*aedes aegypti*) serving as the vector for the disease, it was reintroduced annually from tropical locations (likely through New Orleans' port connections to the Caribbean and Latin America). Yellow fever was at its peak in the summer and fall, its timing coinciding with Tibbits' letters. The last yellow fever epidemic in the United States occurred in 1905, only a few years after the discovery that mosquitoes transmitted it.⁵² The peak in the lumber industry came after this last epidemic, but during the late nineteenth century the disease environment encountered by loggers and mill workers in the state left them open to this risk. To Tibbits, a migrant to Louisiana specifically for work in the lumber industry, the disease seems absolutely related to the working environment with which he engaged, though for many millions of southerners, the risks of yellow fever had little to do with the industry, demonstrating a porosity between the hazards of a working environment and epidemic disease environments.

This section is not an exhaustive history of the risks faced by workers in the Louisiana lumber industry, nor does it explore every occupation in the industry, but it does shed light on the conditions faced across the industry and the way in which the

⁵¹ George Tibbits, personal letter to Charles Wright, October 8, 1898, Charles L. Wright papers, LSU library.

⁵² Margaret Humphreys, *Yellow Fever and the South* (New Brunswick, N.J.: Rutgers University Press, 1991); John H. Ellis, *Yellow Fever & Public Health in the New South* (Lexington: The University Press of Kentucky, 1992); Khaled J. Bloom, *The Mississippi Valley's Great Yellow Fever Epidemic of 1878* (Baton Rouge: Louisiana State University Press, 1993); Jo Ann Carrigan, *The Saffron Scourge: A History of Yellow Fever in Louisiana* (Lafayette, La.: Center for Louisiana Studies, University of Southwestern Louisiana, 1994).

working environment was understood by management, as well as how these conditions were politicized by workers. In other words, the working environment was defined as much by the set of social relations in Louisiana as it was by the physical risks and environment.

III. Race and the working environment

Dangerous conditions, of course, did not necessarily or automatically precipitate some radical class-consciousness, as J.B. White seemed to fear from the injured sawyer. The appeal of BTW suggests this was true at certain moments, but spaces in the mills could also amplify and further the racist social relations of the Jim Crow South, increasing the on-the-job risks for African Americans. Furthermore, though Slagle, White, and other directors of LCLC certainly held racist ideas, this in and of itself did not guarantee that white workers and farmers would cooperate with their mill's employment of black workers.

The LCLC was a "foreign" corporation operating in Louisiana from its base in Missouri. In the summer of 1902, shortly after the Clarks plant opened, LCLC contracted a Mr. Thomas for the construction of a new logging spur railroad. Thomas apparently hired a group of migrant African American workers from outside of the Clarks region to perform this labor. In response to their arrival at LCLC, a group of about fifteen local white farmers began threatening these black workers and the company. After holding a meeting, two representatives of the group approached V.M. Mason, the general superintendent at the Clarks mill, to explain their grievances. Mr. Holloday, one of their spokesmen, told Mason:

We were sent here by a number of farmers to say to you that the negroes that Mr. Thomas [the logging contractor] brought into here cannot work here as they are tramps. There are plenty of negroes around here who live close and who work on the different farms and as they are now idle you can work them here and around the mill and they will not be molested. ... Nothing would have been said had Mr. Thomas or you all (La. Cent. Lbr. Co.) employed the negroes who live in this vicinity.

Holloday went on to clarify the difference between the local and the “tramp” African Americans and reiterated his call for their departure:

[B]ut as to the negroes Mr. Thomas brought into here, they cannot stay as they will steal and our women are not always at home and we have our cows and hogs and these negroes cannot stay around here. ... It is the sentiment of all the farmers that these negroes, tramp negroes, with Mr. Thomas cannot remain here, they must leave. ... Mr. Mason you certainly do not know the nature of a negro ...⁵³

Mason replied to Holloday, and his friend George Nethery, telling the farmers that “there would be no compromise.” Mason stated that LCLC “preferred white men, [but] some of the work was such that white men would not do it and in that case we would get labor that would do it.”⁵⁴ Holloday’s presentation to Mason, recorded by a clerk at LCLC, and his reply to Mason’s unwillingness to bend to the farmers’ will, must have been a good deal less civil than the words recorded by the clerk. After the meeting, Mason called on the Sheriff, who promised that if any of the farmers who sent Holloday and Nethery to talk with Mason appeared around the Clarks mill or woods, they would be promptly arrested. This too must not have settled the issue in the mind of Mason and the LCLC management, however, as he wrote to Slagle (who was in Kansas City at the time), “We can muster tonight about 10 guns with men whom we can absolutely trust behind them and I have no apprehension whatever of any further trouble or the outcome of any trouble that might come up, as I believe we having the right side of the question and fighting on

⁵³ Mr. Holloday, transcript of speech to V.M. Mason, July 2, 1902, f. 22, LCLC papers.

⁵⁴ V.M. Mason, personal letter to C.E. Slagle, July 3, 1902, f. 22, LCLC papers.

our own ground gives us greater advantage over greater numbers.”⁵⁵

What is noteworthy in this potentially violent encounter between the company and the white farmers is not the racism evinced by the farmers in their attitudes toward African Americans, or Mason’s stated preference for white labor, but rather the way that local farmers argued against the use of “tramp negroes.” They did not suggest that LCLC should not exploit black workers, rather that the firm was violating the racial code by bringing in black workers from *outside* the community. The management of LCLC, none from Louisiana, failed to appreciate the extent to which they were violating the logic of Jim Crow by upending the racial balance in the Clarks area. Mason revealed his own ignorance of the local conditions by writing to Slagle: “I am sorry that I am not better acquainted throughout the Country [*sic*] as it would be to our advantage to see personally the best men in the community and get the benefit of their influence thus creating public sentiment in our favor.”⁵⁶

LCLC, it seems, was ultimately undeterred by the threats of the white farmers over the source of the labor for their mills. Company records reveal that over the next twelve months the company sought to bring groups of Mexican workers to its mill. W.W. Warren of the Louisiana Long Leaf Lumber Company (LLLLC) explained to Slagle and LCLC that they had 18 Mexican workers “holding out alright” and told Slagle where he could find other Mexican workers:

I do not think you would have any difficulty whatever in getting plenty of them at Beaumont [Texas]. ... [A]nd they are idle as they have been working on railroad work during the summer and the work is finished and they have nothing to do, and maybe they are pretty hungry. If you sent a man down there have him go see Gonzales who runs the Chili con Carne stand west of the Southern Pacific depot on Crockett St. Gonzales is an old resident of Beaumont and knows all the Mexicans

⁵⁵ V.M. Mason, personal letter to C.E. Slagle, July 3, 1902, f. 22, LCLC papers.

⁵⁶ *Ibid.*

there.⁵⁷

Following the “padrone” system of labor contracting described by historian Gunther Peck, these workers were likely managed by a petty labor boss who contracted with firms for the labor of a larger group of immigrant workers.⁵⁸ That LCLC was in the market for immigrant laborers suggests that the firm was certainly not going to let local farmers dictate the labor policy, and that cheap labor, wherever it could be found, would be accepted by the industry. Mexican workers remained a small segment of the workforce in the southern lumber industry, but during the BTW uprising the union published articles in its newspapers in Spanish, suggesting that this group remained an important (or desired) constituency for the union.

The July 1902 conflict with local whites was not the only time that the firm stepped in to “protect” black workers, though local farmers were not the only source of danger for black workers in the mills. In addition to unsafe machinery, white workers could add to the on-the-job risks for black workers. In early 1904, general manager at LCLC, C.E. Slagle, wrote to company president J.B. White in Missouri to report on “labor troubles” at their Clarks mill. A crowd of white workers apparently ran black workers off the job after an African American man brought a revolver to the mill. Slagle told White: “The negro explained that he brought the gun for another fellow who was to meet him there, but did not do so. The negro of course left the mill immediately and run away as they are not very brave in this country [*sic*].” The company had the leaders of the white “mob” arrested, and Slagle felt that “our arresting these men prevented a strike in

⁵⁷ W.W. Warren, personal letter to C.E. Slagle, October 23, 1902, f. 40, LCLC papers.

⁵⁸ On immigrant labor contracting and the “unstable fiction” of free labor in the Gilded Age and Progressive Era, see Gunther Peck, *Reinventing Free Labor: Padrones and Immigrant Workers in the North American West, 1880-1930* (Cambridge: Cambridge University Press, 2000).

the yard, planing mill and other places, thereby confining it entirely to the saw mill and I am sure that the whisket [*sic*] that was being drank would have made serious trouble for us Wednesday night had we not gotten these leaders out of town.”⁵⁹ On-the-job antipathy and threats of violence, though not directed against the company, were antithetical to the needs of the LCLC. This example, and the behavior of the firm, is likely not unique.

William Jones, a historian of African American lumber workers, described how a lumber company in Florida stepped in to stop a crowd of white workers and farmers from attempting to burn down the “colored quarters” of a mill town during the upsurge in racial terrorism following World War I. He explained simply: “Southern lumber firms could not afford to allow racist terrorists to deprive them of black labor.”⁶⁰

After the episode at LCLC, Slagle consulted with their lawyers about how to use federal courts to discipline white workers and farmers where local courts would not. The firm’s lawyers, Stubbs & Russell, explained to Slagle that because LCLC was a foreign (non-Louisiana based) corporation operating in the state, it could likely receive an injunction from a federal district court judge “against any of our men making threats or intimidating labor.” If that did not stop white workers from harassing black workers, U.S. Marshals could take them to federal prison, as happened on the Vicksburg, Shreveport, and Pacific Railroad after farmers repeatedly ran black workers off the job as they laid tracks.⁶¹ The same impulse (profit) driving lumber firms to create and maintain dangerous working conditions in the mills, then, also could serve to restrain a second set of dangers lurking in the lumbering working environment: the threat of racial violence in the Jim Crow South.

⁵⁹ C.E. Slagle, letter to J.B. White, February 15, 1904, f. 122, LCLC papers.

⁶⁰ Jones, *The Tribe of Black Ulysses*, 27.

⁶¹ C.E. Slagle, letter to J.B. White, February 15, 1904, f. 122, LCLC papers.

In 1911, for example, an undercover Pinkerton operative hired by LCLC reported one episode in which racial thinking among white workers shaped the physical risks of the workplace for African Americans. Operative #11 wrote that while watching the operations in the Clarks sawmill, “sawyer [Claude] Jackson called me over to his stand. Jackson stated while I was not working for me to stay around in the [operator’s] box with him and he would show me how to saw.”⁶² Jackson, according to this operative was “a first-class sawyer and attends to his business. He rushes the work and keeps the men on the jump all the time.”⁶³ Holding a skilled position in the mill Jackson unknowingly offered this spy a chance to learn his valuable job: “Jackson also stated after I had watched him several days that he would turn over the levers to me and let me saw some and by doing that I could learn a whole lot. I stated I might kick a log over the carriage and kill one of the negroes. Jackson then stated that would be nothing, only a dead negro in Clarks, La., and one more less [*sic*].”⁶⁴ The broader inequalities of Jim Crow, then, formed a source of on-the-job danger for African American workers as white racial attitudes could have physical repercussions.

As in many other industries in the Jim Crow South, African Americans disproportionately held jobs at the bottom of the occupational ladder, though in lumber production there were few “skilled” positions in a given mill. Still, in 1910, for example, black workers constituted 62.8 percent of “laborers,” 39.9 percent of “semiskilled” workers, but only 23.6 percent of sawyers in the southern industry.⁶⁵ Even when firms did hire an African American in a skilled position it could be resented by the whites in

⁶² “Operative #11 reports,” May 29, 1911, f. 670, LCLC papers.

⁶³ “Operative #11 reports,” May 30, 1911, f. 670, LCLC papers.

⁶⁴ “Operative #11 reports,” May 29, 1911, f. 670, LCLC papers.

⁶⁵ Wright, *Old South, New South*, 179. See also John C. Howard, *The Negro in the Lumber Industry, Report No. 19* (Philadelphia: University of Pennsylvania, 1970).

the town, mixing with popular racial and gender ideologies. After promoting a black man to a skilled position in an LCLC mill, C.E. Slagle received an anonymous letter reading, “The planing mill now holds the first negro grader that has ever been in the mill, whose place could easily be filled with a white man. The negro also boards with Mr. Frickie. We do not believe you will approve of any of this and we as citizens of this place will not stand for. Especially the ladies. We will be very thankful if you will investigate this. A friend.”⁶⁶

In 1908, LCLC company papers recorded a “matter of difficulty between Ben Valentine and George Wallace.”⁶⁷ Though the specific source of the argument went unrecorded, Valentine, a white man, found Wallace, an African American, in the mill after the noon lunch whistle blew, and he hit Wallace.⁶⁸ Though mill superintendent Alex Hamilton reported that Wallace had “completely recovered,” the incident suggests that the paternalism of mill owners that made them odd protectors of African Americans in cases of mob violence, did not make the mill itself safe on a day-to-day basis.

Mill owners did not, of course, seek to protect black workers to promote social equality in the Louisiana hinterland. During the heyday of the Brotherhood of Timber workers, when white and black workers were organizing on an integrated basis in the Louisiana woods and mills, the SLOA sought to use racial hierarchies to undermine the power of the union. M.L. Alexander wrote to the SLOA executive committee in November 1911:

As far as the Louisiana situation is considered ... It occurs to me that there is one strong point that could be used effectively against this organization [the BTW]

⁶⁶ Anonymous letter to C.E. Slagle, May 8, 1915, f. 1244, LCLC papers.

⁶⁷ Alex Hamilton, personal Letter to C.E. Slagle, October 6, 1908, f. 463, LCLC papers.

⁶⁸ A.C. Warner, statement on “the trouble between Ben Valentine and the negro George Wallace,” October 6, 1908, f. 463, LCLC papers.

and its future success, if properly handled, and that is the negro question; no order can succeed in this country or this section of the country, where the negroes and whites are allowed to affiliate together on an equal social basis and if this information was judiciously disseminated it would have a splendid effect in breaking it up.⁶⁹

When playing to the institution of Jim Crow served the interests of the SLOA it made sure to do so.

What arrangements worked best to divide workers at the point of production, as opposed to in the press or in the general sentiment of the public, was another matter. In the winter of 1914, LCLC general manager, C.E. Slagle, and the superintendent of the Clarks plant, J.P. Collins, met and discussed the racial division of labor in their mills. Collins mentioned during this conversation that in the “little mill” (hardwood lumber mill) at the Clarks plant, they only employed one African American. Writing to Collins the day after the meeting, Slagle revealed that this fact “did not impress me very forcibly at the time; but since I saw you I have been giving the statement considerable thought.” Slagle continued by speculating what effect this racial division “might have on our labor conditions if carried to the same conclusions in the other departments of our plant.”⁷⁰

Elaborating on his meaning, Slagle wrote:

It was the experience of other Companies south of us during the Timber Workers agitation that where nearly all, or all, white men were employed, those Companies were hit hardest with the labor troubles, because the white men, almost to a man in some cases, stood together; but the conditions were quite different where the plants were more evenly divided as to blacks and whites, and I am told that this experience caused the Gulf Lumber Co. at Fullerton, Louisiana to employ a greater number of blacks in order to prevent a re-occurrence [*sic*] of their labor troubles. I believe that our Company would make a serious mistake if we did not at all times keep the labor pretty well divided as to blacks and whites. I remember our own strike here at Clarks, which was partially successful because of the larger number of white men working in the sawmill. The very trouble is the cause today of a large number of blacks working in sawmill #2. It occurred to me to give you my views

⁶⁹ M.L. Alexander, letter to SLOA executive committee, November 4, 1911, f. 706, LCLC papers.

⁷⁰ C.E. Slagle, letter to J.P. Collins, February 18, 1914, f. 1033, LCLC papers.

and point out some of the dangers that might come to us a little later if we are not careful as to the division of labor.

There is yet some agitation going on among the whites in the central and southern part of Louisiana and I, therefore, urge that you keep in mind the employing of both blacks and whites to be somewhat equal in the operations as a whole. I, of course, understand that there are some places where whites will predominate; but they should be so divided that it would be difficult for the whites to shut down the plant as a whole at any time.⁷¹

Though labor historians often write about the way in which capitalists employ the tactic of “divide and rule” – manipulating racial or ethnic antipathy among its workforce – in order to keep their businesses free from the threat of the union, these statements suggest a need to clarify the meaning of “divide and rule.” First, the letters produced by Alexander and Slagle points out that a “divide and rule” strategy was conducted differently in different social arenas. In the public sphere, suggesting the union promoted social equality and integration is exactly what the SLOA hoped to disseminate in order to undermine the union. At the same time, in private, Slagle pointed out that the key to avoiding union power was keeping the mills integrated. Second, these approaches may make us think about “multiple paths” to “divide and rule,” where a myriad of strategies can be employed to divide workers based on race. Though often collapsed under the heading “divide and rule,” the process of permanently excluding black workers from the manufacturing process and establishing a paternal relationship with white workers, as in the southern textile industry (or northern building trades), is quite different than actively keeping plants integrated in order to prevent solidarities from forming.⁷² That both excluding black workers and integrating factories backfired in differing moments in

⁷¹ C.E. Slagle, letter to J.P. Collins, February 18 , 1914, f. 1033, LCLC papers.

⁷² On the racial politics and management strategies in other southern industries, see Henry M. McKiven, Jr., *Iron and Steel: Class, Race, and Community in Birmingham, Alabama, 1875-1920* (Chapel Hill: University of North Carolina Press, 1995); and Bryant Simon, *A Fabric of Defeat: The Politics of South Carolina Millhands, 1910-1948* (Chapel Hill: University of North Carolina Press, 1998).

southern history – in the BTW efforts and many others – does not mean that tracing the strategy of capital is any less important.

In his autobiography, the Wobbly leader “Big Bill” Haywood recounted his trip to the Piney Woods during the spring of 1912, commenting on the BTW’s challenge to the racial politics of Louisiana. With Covington Hall, he spoke to the BTW convention in Alexandria. After inquiring as to why there were not any African American workers in attendance, Haywood was informed that it was against the law for white and black men to meet together and that black workers were holding their portion of the convention in another hall. Haywood recollected that he told the leaders, “You work in the same mills together. Sometimes a black man and a white man chop down the same tree together. You are meeting in convention now to discuss the conditions under which you labor. ... Why not be sensible about this and call the Negroes into this convention? If it is against the law, this is one time when the law should be broken.” The black workers came into the Opera House in Alexandria and the convention proceeded without segregation. Haywood wrote, “There was no interference by the management or the police, and the meeting had a tremendous effect on the workers, who discovered that they could mingle in meetings as they mingled at work.”⁷³ Haywood’s account of the union’s convention in 1912 reveals two things. First, and in contrast to the hopes of mill owners and managers like C.E. Slagle, mingling and working together did not necessarily result in further racial antipathy, but at least within the narrow bounds of an industrial movement, could result in, and even further, solidarities. Second, though much of this section has dealt with the ways that lumber firms manipulated race and social space to produce a “sawmill” world

⁷³ William D. Haywood, *Bill Haywood’s Book: The Autobiography of William D. Haywood* (New York: International Publishers, 1929), 241-242.

that served their interests, workers in the BTW, as they built their short-lived movement around a different set of values, also repurposed and challenged the spaces of oppression, including some of the strictures of Jim Crow.

These examples collectively illustrate the extent to which racism itself – though a shared social ideology based on the premise of African American inferiority certainly flourished – did not in and of itself bind whites together. Instead, in these local examples from Clarks, Louisiana we see that white workers, farmers, and the Louisiana Central Lumber Company frequently clashed over understandings of where African Americans fit in the community and how Jim Crow operated. Sometimes these conflicts played out explicitly in the workplace, intensifying the on-the-job risks for black workers, and sometimes they appeared in the company towns that dotted the lumbering region of the state. It is to the social and spatial relations of the company town that this chapter now turns.

IV. The Living Environment

The social and spatial inequalities and risks that made mill labor dangerous and racially contentious also made company towns sites of conflict. During the summer of 1914 a researcher for the U.S. Government's Commission on Industrial Relations (CIR), David J. Saposs, arrived in Fullerton, Louisiana, home of the Gulf Lumber Company. As part of the "Research and Investigation Division" of the CIR, Saposs had been charged, at the direction of division leader John R. Commons (later known for his foundational histories of the American labor movement), to explore company towns, or as Saposs referred to them, "isolated industrial communities." Posing variously as a "prospective

businessman, settler or working man,” Saposs spent two days exploring the nature of social relations in Fullerton and nearby Cravens (home of the Pickering Land and Lumber Company), speaking to community members, and interviewing company officials after “sufficient information” was gathered.⁷⁴ During that summer, Saposs also visited company towns in South Carolina, Texas, and Arizona following the same procedure of information gathering. Significantly, nothing in his handwritten notes or in his fifty-page report, entitled “Self-Government and Freedom of Action in Isolated Industrial Communities,” and completed in January 1915, suggests that he ever entered a sawmill. Instead, his interviews and conclusions point to the power of lumber firms to manipulate and dominate the social and geographical space beyond the factory gates.

Saposs described the dominance of the lumber firms in Fullerton, Cravens and other company towns as a form of “absolutism” that undermined the “exercise [of] the simplest right ... such for instance, as the use of the public streets.”⁷⁵ The power of lumber, mining or textile firms, Saposs noted, was “not easily instilled or kept in the hearts of the inhabitants by merely overawing them with its greatness, anymore than a medieval ruler overawed his subjects, by his splendor alone. More drastic and effective measures are necessary in order to maintain a dominant hold.”⁷⁶ Specifically, Saposs suggested that companies had cultivated a “territorial dependence” of their workforce: “The first and most effective [method] is to make everyone dependent upon the company, territorially as well as economically.”⁷⁷ In other words, the power over space and social

⁷⁴ David J. Saposs, “Self-Government and Freedom of Action in Isolated Industrial Communities,” CIR 10:0851, 3-4.

⁷⁵ Ibid., 5. For a romantic view of the history of Fullerton, see Anna C. Burns, “The Gulf Lumber Company, Fullerton: A View of Lumbering During Louisiana’s Golden Era,” *Louisiana History* 20, no. 2 (1979): 197-207.

⁷⁶ Saposs, “Self-Government and Freedom of Action in Isolated Industrial Communities,” 12.

⁷⁷ Ibid.

relations *outside* the mill formed the backbone of the “absolutism” in the company towns of western Louisiana.

Many lumber towns were not incorporated with the state, and thus were technically private property. Saposs reported that firms built fences around the towns, which “enable[d] the company to deny admittance to those that it cannot control. ... [F]armers, hawksters [*sic*] and grocery men who are known to be sympathizers of labor are not permitted to ply their trade on the premises owned by the company.”⁷⁸ Saposs wrote in his notes, “The Colored quarters at Fullerton, were originally part of the incorporated township. Last year the company fenced it in so as to keep out those whom it considered undesirable.”⁷⁹ The superintendent of the Pickering mill confirmed this practice, telling Saposs, “The company has not kept out any merchants or peddlers unless they were in sympathy with the I.W.W. and the Socialists. J.W. Morgan, who owned a store about $\frac{3}{4}$ of a mile away made it a practice to solicit members to the union while selling his wares to the company employees.”⁸⁰ From talking to other town residents, Saposs learned that politics was not the only reason that the company prevented shop owners from entering the workers’ quarters.

J.J. Guess, the owner of a “rocket store,” or general store, in Fullerton relayed his experience with the firms to Saposs: “About a month ago the Deputy Sheriffs of the Fullerton [Gulf] Lumber Co., Fullerton, and the Pickering Land and Lumber Co., Cravens, came to him with orders from their respective superintendents to discontinue

⁷⁸ Saposs, “Self-Government and Freedom of Action in Isolated Industrial Communities,” 13, 15.

⁷⁹ Saposs, J.F. Pinchbeck interview, August 26, 1914, “Company Towns,” CIR 3:0028, 3-4. Saposs continued: “Some of the people hinted that it was illegal to fence in a section of an incorporated town and treat it as private property. In order to overcome this objection the company had the city council exclude that portion from the town limits. This is undoubtedly illegal as the only body that can alter the corporate limits of a governmental unit is the state legislature. This goes to illustrate the political subserviency [*sic*] of the Aldermen and Mayor, who are all employees of the company.”

⁸⁰ Saposs, interview with Mr. Tuxworth, August 27, 1914, “Company Towns,” CIR 3:0055.

delivering goods to these towns. Mr. Guess appealed to the Supt. [superintendent] of the Pickering Mill who said that the company was entitled to the patronage of its employees as it made it possible for them to earn their money in the first place, and that he would see to it that the company got this patronage.”⁸¹ As this example illustrates, more than just pro-union businessmen were excluded from the towns – retail competitors played an important role as well. In an interview with the Superintendent at Pickering, a Mr. Tuxworth, Saposs got him to admit as much. Saposs wrote: “Mr. Tuxworth feels that the company is responsible for the prosperity of the community and is entitled to whatever benefits that are to be derived from this prosperity. Upon this he justifies the company’s right to conduct a store on a reasonable profit basis, and not to allow others to set up in business on its ground and compete with it.”⁸²

Not only were store owners prohibited from going to the towns, lumber firms made a concerted effort to intimidate workers and their families from shopping anywhere but company stores. Saposs wrote: “The railway flagman [in Fullerton] at the crossing told Mr. Davis that Supt. Burlingame called all the colored people together and instructed them to trade at the company store only. Also about two weeks ago the Supt. placed himself at the cross road that leads to McCollogh’s [*sic*] store and turned back all the colored women who were on their way to shop there.”⁸³ The clerk at McCoullough’s store confirmed the story and told Saposs that business had fallen off sharply since.⁸⁴ Even Operative #5, the Pinkerton spy who recorded the accident in the Standard mill of the LCLC in 1911, was eventually fired for being seen walking to and from the nearby

⁸¹ Saposs, interview with J.J. Guess, August 27, 1914, “Company Towns,” CIR 3:0035.

⁸² Saposs, interview with Mr. Tuxworth, August 27, 1914, “Company Towns,” CIR 3:0055.

⁸³ Saposs, interview with A.J. Davis, 27 August 1914, “Company Towns,” CIR 3:0039.

⁸⁴ Saposs, interview with clerk in charge of S.S. McCoullough’s store, August 26, 1914, “Company Towns,” CIR 3:0045.

town of Olla with too much frequency. On June 8, 1911, Operative #5 wrote in his report: “I spoke to [mill superintendent] Mr. Collins on the sidewalk between the office and the Dispensary, and asked him why I had been discharged, and he said: ‘Well, you have been going down to Olla have you not?’ and I answered: ‘Yes sir’; and he said: ‘Well, that’s why; we don’t want our men to go there as long as those agitators are there.’”⁸⁵

In his notes, Saposs described an interview with a hotel owner in Fullerton, J.F. Pinchbock, who also ran a horse-drawn livery hack (local transportation) business from the train station to the town.

About four months the company ordered its deputy sheriff to keep his hack from entering Fullerton. Their reason for doing this was that they had granted this privilege to the man who runs the stable at Fullerton. The ‘nigger’ driver was afraid to disregard the commands of the Deputy so Pinchback ceased running the hack until vacation time when he put his boy on. He then went to the Deputy and warned him that if his boy is interfered with there will be trouble. While the Deputy tries to stop the boy he manages so far to bluff him.

Pinchbock had a similar experience in Cravens, a town owned by the Pickering Land and Lumber Co., “where it is necessary for him to quarrel occasionally with the Deputy. If he was not known in the neighborhood as a bold and fearless man there is no doubt that his constitutional rights would long have been trampled upon.”⁸⁶

Movement in the lumber towns was tightly regulated for workers and their families. Still, controlling this space for commercial or political purposes by setting up a fence, hiring spies, or standing at a dusty railroad crossing and forcing women to shop at the company store, did not stop workers from challenging this authority, as the protracted effort made by the BTW against the lumber firms and the Southern Lumber Operators’ Association (SLOA) makes clear. Saposs recorded a rural shop owner’s recollection of an

⁸⁵ “Operative # 5 reports,” June 8, 1911, f. 672, LCLC papers.

⁸⁶ Saposs, interview with J.F. Pinchbock, “Company Towns,” CIR 3:0028, 2-3.

evening meeting of the union held on a public road:

Sometime ago [Jay] Smith and Rice two I.W.W. organizers held an open air meeting about 2/4 of a mile from the Fullerton mill. This was at night and only about 17 people were in the open – all these were not employed by the company. They were mainly farmers. Every once and a while a match would be lit by a smoking listener in the nearby shrubbery and woods. A number of people estimated that there must have been about 200 listeners who were afraid to be seen for fear they would be reported by a company spy.⁸⁷

Even if the shop owner exaggerated the numbers watching quietly from the darkness of the woods, this action suggests that mill owners' control over space in the town remained contested.

Other towns in the lumber region of Louisiana and Texas were controlled similarly. The journalist George Creel, in an article for *Harper's Weekly* in 1915, described the towns owned by the Kirby Lumber Company in east Texas as “feudal towns,” bringing an evocative and powerful, if slightly misplaced, analogy to a national readership. Creel described the scrip system, infrequent paydays, low wages, high boarding fees, and hospital fees that kept the industry in control of its workforce, but as in Fullerton, he realized that firms kept the whole community in their orbit, regardless of whether residents toiled in a sawmill or not. Creel, though, identified the scrip system as the feature that enshrined the firm at the top of the economic system in the town, writing, “The system, therefore, controls not only the men who work for the Kirby Lumber Company, but also every person doing business in Kirbyville. Whatever their desires, the merchandise check leads all of them back to the company store and office inevitably.”⁸⁸

Cash was rare, and so most transactions required the use (and discounting) of company

⁸⁷ Saposs, interview with J.F. Pinchbuck, “Company Towns,” CIR 3:0028, 5-6. In pointing out that members of the audience were not timber workers, the narrator captured how the BTW was as much a community movement as it was a workplace one. Farmers in the region were important constituents for the union.

⁸⁸ George Creel, “The Fuedal Towns of Texas,” *Harper's Weekly*, January 23, 1915, 76.

scrip. What Creel did not highlight, however, is something that comes through in Saposs's report and notes: the way that intimidation was necessary to keep the scrip system and company store central in the functioning of the town. Both workers and small shop owners were certainly looking for ways around this institution.

The type of spatial control that Saposs witnessed around Fullerton, Louisiana, and economic control Creel saw in the east Texas towns was also witnessed in the workings of the LCLC in Clarks, Louisiana during the same period. Evidence from the managers there provides evidence of the ways that class struggles take place over space, as well as over ideas and time. In the fall of 1914, C.E. Slagle wrote to the mill manager to discuss doing "what is necessary to improve the moral uplift of the community." Specifically, Slagle reported he had received an anonymous letter from a citizen in Grayson, a town only two miles from the Clarks mill, stating that "some of our [LCLC's] men in the vicinity of Grayson ... have been gambling and drinking." Slagle showed the letter to the Sheriff of Grayson and reported to him that LCLC had laid off "six or seven of our men for that conduct." Slagle turned his attention to the living arrangements of the firm's African American workers, suggesting that the men the firm had already laid off did not constitute the only threat to the "moral uplift" in Grayson:

As to our employing negroes living out in the country, or in the vicinity of Grayson. I have for some time believed this to be a wrong policy, and with this excuse, we might find that we can begin to let some of them out and employ some negroes that can board or live here. We may be short of houses, but we could let out a few of these. It is possible that the people of Grayson want those negroes to work on their farms instead of working for us.⁸⁹

The letter from the citizen seems to have set off a flurry of communication and reappraisal of the spatial relations in the Clarks region among the LCLC management

⁸⁹ C.E. Slagle, personal letter to Collins, October 27, 1914, f. 1142, LCLC papers.

that sought to simultaneously reduce the friction between the white communities in the towns surrounding the Clarks mill (by removing workers from public spaces) and also tighten the firms' control over the living spaces occupied by its black workers.

Slagle followed up his letter to Collins two weeks later, beginning with a sense of shock that only two black workers lived in the African American company boarding house in Clarks run by Will Jones (also black). Slagle faced continued pressure from "some of the Grayson citizens" who "saw me Saturday and urged that we do something toward the habits of some of the colored workmen who live in the vicinity of Grayson, but work for us at the mills and on the steel gang." The "Grayson citizens" told Slagle that black workers frequently stopped in Grayson after work to use "the liquors that can be obtained through blind tigers [speakeasies] there" and on Saturday evenings created some disturbances in the town. Slagle told Collins: "It occurs to me that if Will Jones has but two boarders, that we should, as quickly as is practicable, pick up men who would live in our houses and board at our boarding house here at Clarks; and let out these country negroes as fast as we can do it without them."⁹⁰

The following day Slagle authorized a reduction in rent at the African American boarding house in Clarks that was run by Will Jones in order to entice workers to move back to the town.⁹¹ Additionally, the same day he reduced the rent at the African American boarding house he wrote to Collins that "it would seem now was the opportunity for our greatly reducing the number of our employees living in the country." He continued:

I wish you would take this up with the foremen who are employing these country negroes and arrange for a quick reduction of that class of labor. There is a lot of

⁹⁰ C.E. Slagle, personal letter to Collins, November 9, 1914, f. 1149, LCLC papers.

⁹¹ C.E. Slagle, personal letter to Fenton (Cashier), November 10, 1914, f. 1150, LCLC papers.

labor drifting, and these single negroes living in the country should either move to town, or be replaced with those who are willing to live in our quarters so that we may have better control of our labor. The Grayson people are inclined to blame us for the lawless acts of these country negroes in and around Grayson; and there will not be a better time to make changes that we have often thought would be beneficial to our business. ... The men [who live in town] are bettered prepared to do a day's work, as there is no question but what coming and going two to three miles each way daily would interfere with their daily work."⁹²

Manipulating the living situation of black workers would not only reduce complaints from white citizens in Grayson – from whom they would not like a repeat of the lynch mob threats of 1902 – but also better prepare the workers better for the jobs that made money for the firm. Slagle reported that five African American workers lived over four miles from the Clarks mill and that they lived “so far away [they] cannot do a days work after traveling so far to and from their work.”⁹³

Race was not the only factor shaping LCLC's housing policy. Marital status played an important role, particularly with white workers. Slagle's new housing decisions affected “19 single colored employees, who live in the country;” men who would be forced, according to Slagle, to move to the town or leave the employ of the LCLC. The firm employed a further five single white men, and Slagle told Collins, “I think it is important that these men be notified that we no longer want employees who are single men living out in the country, as we believe that they will give us better service if they live here.” Slagle made exceptions for workers who were either married or supporting a family on a farm, but “if there are any single white men simply boarding in the country as a matter of preference, I think that they should be notified that they will be expected to move to town or their places will be given to others who are willing to live here.”⁹⁴ After

⁹² C.E. Slagle, personal letter to Collins, November 10, 1914, f. 1150, LCLC papers.

⁹³ C.E. Slagle, personal letter to Collins, November 13, 1914, f. 1152, LCLC papers.

⁹⁴ C.E. Slagle, personal letter to Collins, November 12, 1914, f. 1151, LCLC papers.

moving “four or five of the negro women renting our houses and working as domestics, or washing for people” into rooms rented from married couples, Slagle thought that “when these changes are made, it will give us 10 more houses for married colored men living 3 ½, 4 and 5 miles from Clarks will either move to town or their places be taken on by other families who will live in Clarks.”⁹⁵

Though during November LCLC’s management sought to bring its employees further into the grip of the company town and the workplace, in December 1914 the status of their employees’ living situation revealed persistent divergence from the ideals that Slagle offered in his orders to Collins. Of 176 employees, 88 married employees and 30 single ones lived in town, while 58 employees continued to live in the country (no marital status given).⁹⁶ Many of the employees in the country may have been married, but their own breakdown does not reveal the division. Meanwhile, the immoral acts that seems to have brought the issue of housing and control to the forefront of Slagle’s mind (even if morality per se was not his ultimate goal), were not necessarily resolved by the changes that pulled more workers into the town of Clarks. In January 1916, for example, two town residents wrote to Slagle to report “the names of the unmarried couples that is [*sic*] living in the company’s houses.” Additionally, they conjectured that “Will Jones,” the African American boarding house manager, “is endorsing the same immoral acts in his boarding department.”⁹⁷ These residents revealed fear of African American sexuality; fears that could be used to reinforce the racial order.

Efforts by firms to control the living environments in lumber towns also meant controlling gender. When it came to moving lumber workers from the countryside into

⁹⁵ C.E. Slagle, personal letter to Collins, November 17, 1914, f. 1154, LCLC papers.

⁹⁶ List of LCLC workers in Clarks by marital status and residence, December 1914, f. 1177, LCLC papers.

⁹⁷ G. McClary and S. Brown, personal letter to C.E. Slagle, f. 1362, LCLC papers.

town, marital status played an important role in defining where families and workers moved. Women also engaged the living environment of lumber towns through their unwaged labor differently than men in the mills did. Earlier in the chapter, David Saposs's investigation into Fullerton showed how managers harassed women attempting to shop at places other than the company store. Their experience as unwaged laborers in lumber towns were also limited by the living environments constructed by lumber managers. In contrast to logging camps, which were "homosocial" spaces (as described in Chapter 3), in these towns, women filled important roles, though their labor remains even less clearly visible in the documentary record than many men's labor in the mills.

The living environments in the company towns run by the lumber industry in Louisiana were deeply authoritarian spaces, and reflect the fact that the power that firms held over workers did not dissipate once they passed the factory gates on the way home after a shift. Instead, the firms like the Gulf Lumber Company in Fullerton, and the Louisiana Central Lumber Company in Clarks, manipulated space in the towns as an extension of the domination of the mills. The spaces in the lumber towns, though, were not simply empty stages on which a set of social struggles took place, but a crucial mechanism for the furthering of class discipline and capitalist power. That this project remained incomplete and contested – as witnessed in acts as diverse as workers' seeming preference to live in the country and not shop at the company store to the radical union movement produced and sustained in the region – suggests both the odds facing workers in overturning such a system, and the illusory nature of the mill owners', in Saposs's words, "absolutism."

V. Conclusion

This chapter explored the development of the lumber industry in Louisiana with specific attention to both working and living environments in order to demonstrate how the control of these spaces was central to the conduct of the firms. This process looked somewhat different in Louisiana's lumber towns than in Minnesota's logging camps as a result of the seasonality of the Minnesota industry and the importance of Jim Crow in the South, but at their heart the managers and owners in these two states (who were occasionally the same people) attempted to limit worker mobility. Additionally, and as in the Minnesota logging industry, it demonstrates the risks and struggles of workers against these firms (and each other). As lumber firms built the productive edifices of modernity out of what they viewed as a socially backwards and environmentally unproductive hinterland, they necessarily also succeeded in constructing a new, distinct set of *working* and *living environments*. To a greater extent in Louisiana than in Minnesota, workers were able to act collectively over an extended period of time in attempting to redefine these spaces. Evidence from the BTW struggle demonstrated both the day-to-day contest over space and social relations, as well a powerful example of the politicization of the working environment. Company records and government investigators show the extent to which the towns served as an extension of the struggles taking place inside the mills.

At the very moment that the lumber owners were fighting their protracted war with the lumber workers' union over social and spatial relations at the point of production, they also began to have to deal with the larger environmental effects of the production process: logging created a new, "cutover" space.

CHAPTER FIVE

Deindustrialization, Lumber, and the Cutover: Minnesota and Louisiana, 1900-1940

The rapidity with which the forests were cut out with little, if any, thought for the future was disastrous. . . . But the encouragement of people by the land promoters, representing railroad and logging companies and other large landholders, as well as by the states, to settle on the cutover lands heaped tragedy on tragedy.

– Vernon Jenson, 1945.¹

When capital has moved on, the importance of place is more clearly revealed.

– Raymond Williams, 1984.²

Lumbering in the Great Lakes states did not end with a bang, to borrow from T.S. Eliot, but rather crept up on the industry, its workers, and other residents as individual firms gradually “cut out” their last stocks of pine and closed up shop during the first two decades of the twentieth century. One group of landowners on Clam Lake in northern Wisconsin learned that the Mississippi River Logging Company had finished logging in their area only when logging crews did not arrive to use the lake to store and float logs to the Chippewa River during the winter logging season of 1907. Having for several years been paid to allow flooding on their land as a result of the dam, landowners wrote a letter to the firm in January 1907, tentatively “inquiring whether or not you expect to use this dam any more or not. If you do not intend to use the same any more for the driving of logs we ask you remove the dead head so the water may be lowered in the lake and cease to damaging us who live on the shores of the lake.”³ The corporate “rights and privileges”

¹ Vernon Jenson, *Lumber and Labor* (New York: Farrar & Rinehart, 1945), 64.

² Raymond Williams, “Decentralism and the Politics of Place,” in *Resources of Hope: Culture, Democracy, Socialism*, Robin Gale, ed. (London: Verso, 1989), 242.

³ Letter to Mississippi River Logging Co., January 7, 1907, Box 1, Folder 1900-1911, Chippewa River Improvement and Log Driving Company Papers (P457), Minnesota Historical Society (MNHS).

of the subsidiary responsible for the dam, the Clam Lake Dam Company, lapsed the same year and it is unclear if they ever removed the dam or compensated the landowners.⁴

Firms did not give the U.S. Post Office Department much better warning when production moved on. The Pine Tree Manufacturing Company wrote to the first assistant postmaster general in March 1914, explaining that the firm was removing a rail spur at Lima, Minnesota after finishing logging the surrounding region and that the post office located there to serve the logging camp was no longer needed. They elaborated:

Our logging operations will be completed in that locality this season and the buildings will be taken down and moved away and the spur will also be vacated and trains discontinue making stops. We would therefore be pleased to have the office discontinued prior to June 1st. There are a few settlers who have been supplied with mail from that office, but we understand that none of them would care to take the office even if the train would continue to make stops there.⁵

Even Minnesota lumber firms' main trade association, the Northern Pine Manufacturers' Association (NPMA), did not get better notice. In 1916, the David Tozer Company, based in Stillwater, Minnesota, wrote to the NPMA: "We have yours of the 9th in which you enclose membership contract for 1916 and, as we have very little stock to cut this year, we wish to resign as members of the Association. We regret very much to be obliged to take a step of this kind but we are practically thru."⁶ The NPMA could not have been as surprised as the landowners on Cass Lake or the Post Office, however, because by the Association's own count, between January 1896 and January 1907, the "list of firms cutting northern pine which went out business" in Minnesota and Wisconsin

⁴ James A. Frear, Secretary of State of Wisc., letter to Mississippi River Logging Company, June 19, 1911, Box 1, Folder 1900-1911, Chippewa River Improvement and Log Driving Company (P457), MNHS.

⁵ Pine Tree Lumber Company, letter to U.S. Post Office Department, March 14, 1914, Box 4, Immigration Land Company Papers (P940), Minnesota Historical Society, St. Paul, Minnesota (hereafter ILC Papers).

⁶ David Tozer Company, letter to Northern Pine Manufacturers Association, February 10, 1916, Box 1, Northern Pine Manufacturers Association papers (P1057), MNHS (hereafter NPMA papers).

stood at 249.⁷ The Association's membership, of course, fell alongside this decline. Still representing 57 firms in 1908, a decade later they represented 16, and in 1928, only 9 firms remained in the organization. In 1931, with a membership of six, the Northern Pine Manufacturers' Association disbanded.⁸ Ultimately, these anecdotes show that while logging and milling ended abruptly for specific firms and communities at the local level, for the region as a whole, the industry only gradually declined. Even then, though, the shadow cast on development of the region by the industry persisted: not through the extraction of trees from the northern forests but through the direction and support of cutover agricultural development.

As this dissertation has already reviewed, between the conclusion of the American Civil War in 1865 and the end of the nineteenth century, the lumber industry's growth radically transformed both social relations and the ecosystem in much of the Great Lakes states of Minnesota, Wisconsin, and Michigan. Minnesota, in particular, produced only 242 million board feet (b.f.) of lumber in 1869, but yielded over 2.3 billion b.f. only thirty years later. Louisiana, meanwhile, cut 306,000 b.f. in 1889, but by 1913, the state cut in excess of 4 billion b.f., almost doubling Minnesota's highest recorded output.⁹ The industrial technologies and social ideologies that guided this fabulous growth in the production of lumber products, however, virtually assured that in only a few more years the region would be irrelevant to the industry. Gifford Pinchot, the first Chief of the United States Forest Service, captured the industry's methods succinctly in 1919:

⁷ "List of firms cutting northern white pine which went out of business..." January 1908, Box 3, NPMA papers.

⁸ Minute book, 1906-1915, Box 6, volume 4; Minute book, 1915-1931, Box 6, volume 5, NPMA papers. The organization was revived in 1933 with the federal government's blessing in order to administer the Lumber Code under the National Recovery Administration.

⁹ Henry B. Steer, *Lumber Production in the United States, 1799-1946*, U.S. Department of Agriculture, Miscellaneous Publication no. 669 (Washington, D.C.: GPO, 1948), table 4.

“Forests are bought and sold for the merchantable timber they contain, with little or no regard for the value of the land which produced them. ... What may become of the land after logging is of little interest ... As it exists in the United States, lumbering is timber mining.”¹⁰ In Minnesota this “timber mining” meant that between the years 1880 and 1915, some 75 percent of all standing timber in the state was cut out.¹¹ By 1920, Minnesota produced only 550 million b.f. – just one-fifth its 1899 peak. Louisiana’s boom crested after 1913, and as the Great Depression approached, in 1928, it cut 2.2 billion b.f., down by almost half from its peak.¹²

Essentially, rapid clear cutting with no efforts at reforestation defined the methods of logging in Minnesota’s pine forests, a process that demanded that capitalists find new sources of lumber to replace declining stocks in the Great Lakes region.¹³ In the South, northern firms discovered a new source of raw materials, and the process continued to be guided by the same ideology and institutions. This hasty removal of lumber, though, was not just a story of the shortsighted destruction of an old growth forest, but also the process of creating a new, albeit severely degraded, ecological and social space: the cutover.¹⁴ Thus, the deindustrialization of Minnesota and Louisiana’s lumber industries is not only a story of “community abandonment,” to quote deindustrialization theorists

¹⁰ Gifford Pinchot, et. al., “Forest Devastation: A National Danger and a Plan to Meet It,” *Journal of Forestry* 17 (1919): 921.

¹¹ Committee on Land Utilization, *Land Utilization in Minnesota: A State Program for the Cut-Over Lands* (Minneapolis: University of Minnesota Press, 1934), 117.

¹² Steer, *Lumber Production in the United States, 1799-1946*, table 4.

¹³ On capital mobility and the American lumber industry, see Agnes Larson, *The White Pine Industry in Minnesota: A History* (Minneapolis: University of Minnesota Press, 2007 [orig. 1949]); Michael Williams, *Americans and their Forests: A Historical Geography* (Cambridge: Cambridge University Press, 1989); Thomas R. Cox, *The Lumberman’s Frontier: Three Centuries of Land Use, Society, and Change in America’s Forests* (Corvallis: Oregon State University, 2010); and William G. Robbins, *Lumberjacks and Legislators: Political Economy of the U.S. Lumber Industry, 1890-1940* (College Station: Texas A&M University Press; 1982).

¹⁴ As addressed in the introduction to this dissertation, a major contribution of this project is its conceptualization of deindustrialization and a focus on spaces even as capital migrated away. This chapter emphasizes that while capital moved out of these regions the influence of the firms did not flee as rapidly.

Barry Bluestone and Bennett Harrison, but a history in which firms that were formerly operating in the region shaped its “post-industrial” development.¹⁵ By using their privileged position, *vis-à-vis* land ownership, they both sold lands to farmers and promoted an ideology in which the transition to smallholder farm colonization on cutover lands made sense.

These lands in Minnesota, and later in Louisiana, were defined first, of course, by an absence of tree cover. While the southern and extreme western parts of Minnesota were dominated by prairie, resembling Iowa in geography and economic development, the northern and eastern sections of Minnesota, representing some 38 million acres, were covered by a small belt of hardwood trees, and a then larger, northern region dominated by coniferous softwoods (pines) where much of the lumbering took place. With the removal of the Eastern White Pine (*pinus strobus*) and the Norway or Red Pine (*pinus resinosa*) by the industry, great stretches of this land were left riddled with stumps and branches (slash), the former costly and difficult to remove and the latter dangerously prone to swift moving firestorms. The legacy of extensive glaciation in the state during the Pleistocene left northern Minnesota with an extensive network of lakes, but also with alternatively swampy, sandy, and rocky land. A 1931 United States Department of Agriculture report in the Great Lakes cutover, for example, illustrated the variability in soil by commenting on one agricultural settlement where “although the soil in the area is of a good productive type, much of it is unsuited for farming purposes because of stoniness.” At another, nearby settlement they simply wrote it had “unproductive sandy

¹⁵ Barry Bluestone and Bennett Harrison, *The Deindustrialization of America: Plant Closings, Community Abandonment, and the Dismantling of Basic Industry* (New York: Basic Books, 1982).

soils.”¹⁶ Frigid winters characterized northern Minnesota (a fact that actually facilitated the development of the lumber industry through the use of ice roads and sleds to transport lumber), but short, cool summers meant as few as few as 100 frost-free-days in parts of the cutover, compared to as many as 150 in the southern part of the state. Around Bemidji, in Beltrami County, for example, the average day of the last killing frost of the season was not until the last week of May, and the average first killing frost of the fall was in the second week of September.¹⁷ In Louisiana, the western and northern parts of the state, as well as the northeast corner around Bogalusa, were the main regions for long and short leaf “yellow” pines. Though Minnesota’s short growing season was obviously not the same as Louisiana’s, the states had other similarities in the quality of their cutover. The risk of fire in Louisiana was as much a problem as it was in Minnesota, and the poor quality of much of the soil did not make much of this land attractive for farming.

Two social and ecological problems faced lumber firms in the late nineteenth and early twentieth century as they looked out on this now “unproductive” land. First, fire represented a serious threat to these landowners, in that the value of remaining forested land could be easily destroyed by the cutover tinderbox. Periodic wildfires also threatened settlements and human life, most famously in the Great Hinkley Fire of 1894 and the Cloquet Fire of 1918, each of which killed over 400 people. In Louisiana, meanwhile, by the Department of Conservation’s own count, in 1924, 715,042 acres burned as a result of fires. The vast majority of this acreage (79 percent) was classified as

¹⁶ W.A. Hartman and J.D. Black, “Economic Aspects of Land Settlement in the Cut-Over Region of the Great Lakes States,” *U.S. Department of Agriculture, Circular No. 160* (Washington, D.C.: GPO, 1931): 72.

¹⁷ *Ibid.*, 10-12.

“nontimbered.”¹⁸ Firms responded to the threat of fires by using a vigorous trade association mechanism during the early 1900s to lobby heavily for federal and state subsidies for fire protection and research in forestry.¹⁹ The work of the Civilian Conservation Corps and Forest Service during the Great Depression in Louisiana represented another important step for the reduction of fires (and potentially lost capital).

A second problem firms faced was property tax obligations on their cutover lands. Unlike in some European lumber producing regions (like Sweden) where tax structures encouraged intensive forest management, the state of Minnesota throughout the first decades of the twentieth century assessed an annual millage (*ad valorem*) tax on timber and cutover lands at rates similar to agricultural lands (values themselves often highly inflated due to speculation). To retain this land thus meant that a landowner would have to pay taxes annually and at rates similar to annually productive agricultural land despite the fact that timber could only be feasibly harvested once every 50 to 100 years. In Louisiana, the warmer climate and faster-growing trees meant that harvests of trees for pulp and paper, and lumber, could be much shorter. Still, this environmental difference did not mean that lumber firms were any more predisposed to adopt intensive private forestry measures. Tax structures thus further incentivized the “cut and run” mentality of lumber capitalists, and by the 1920s, these owners were leaving land tax delinquent with

¹⁸ *Seventh Biennial Report of the Department of Conservation of the State of Louisiana, 1924-1926*, Department of Conservation, 1926: 206.

¹⁹ The Weeks Act of 1911, and the Clarke-McNary Act of 1924 both gave significant and growing aid to states for forest fire protection. See Robbins, *Lumberjacks and Legislators*; and Stephen J. Pyne, *Fire in America: A Cultural History of Wildland and Rural Fire* (Princeton: Princeton University Press, 1982), esp. 346-357. The proper history of Minnesota State Forestry began the year after the Hinkley fire, in 1895 when the state made the State Auditor also the forest commissioner, and created the position of Chief Fire Warden. For this and other legislation in the state related to forests, see Elizabeth Bachmann, *A History of Forestry in Minnesota: With Particular Reference to Forestry Legislation* (St. Paul, Minn.: Minnesota State Department of Conservation, 1965).

greater frequency.²⁰

Migration to the cutover lands for the purpose of farming promised to solve both the fire and tax related problems for lumber firms and offered them a second opportunity to make money from the land, something that intensive forestry did not promise. From the perspective of the early Depression, progressive forester and U.S. Forest Service Lake States Experiment Station director, Raphael Zon explained in a letter, “The reason that land colonization has been overdone is because there were too many private interests which saw in it a means of getting rich quick. No one has yet fallen for forestry as a road to riches and I do not hesitate to point out the obstacles to private forestry.”²¹

As important as the desire for profit making behind lumber firms’ land sales, however, was the fact that the replacement of forests by smallholder agriculture fit well within larger, established cultural and political understandings of “progress” and egalitarian social relations in American life.²² In particular, a “back-to-the-land movement” in the early twentieth century gave lumber companies a ready market for their lands. Drawing on both the legacy of a Jeffersonian agrarian republican tradition and the real and perceived social ills of an industrializing and urbanizing society (complete with slums, unemployment, immigrants, and assorted radicalisms), this loose movement emphasized the independence and social worth of farm life.²³ From both the

²⁰ Roy G. Blakey, *Taxation in Minnesota* (Minneapolis: University of Minnesota Press, 1932), 147-169.

²¹ Raphael Zon, personal letter to P.S. Lovejoy, May 25, 1931, Box 7, Raphael Zon papers (P1237), MNHS.

²² This chapter does not address substantially the questions about the lived experience and the social world made by cutover migrants. Instead, it addresses the process and conditions of migration itself. For a helpful book on how cutover migrants lived, see Robert Gough, *Farming the Cutover: A Social History of Northern Wisconsin, 1900-1940* (Lawrence: University of Kansas Press, 1997).

²³ On the back-to-the-land movement, see Richard White, “Poor Men on Poor Lands: The Back-to-the-Land Movement of the Early Twentieth Century,” in *Experiences in a Promised Land: Essays in Pacific Northwest History*, eds. G. Thomas Edwards and Carlos A. Schwantes (Seattle: University of Washington Press, 1986), 287-303.

“supply” and “demand” sides, then, migration to cutover lands seemed an easy, progressive, market-based solution for the problem of the cutover.²⁴

By the 1930s, however, it was clear that the colonization schemes of the lumber companies in both Minnesota and Louisiana were dreadful failures in both social and ecological terms. The extreme poverty of many cutover migrants, the high rates of tax delinquency, the high per-capita cost of local governments, the renewed state commitment to reforestation, and a general sense that the region would be forever economically depressed brought into question both land use and the process of migration. Though the Great Depression added urgency to the crisis in the cutover, these problems had roots in the very solution to deindustrialization adopted by the lumber companies decades earlier. In response to this crisis and under governments guided by a belief in the state planning ethos of the New Deal, both federal and state governments developed an alternative (and presumably more sustainable) policy for the cutover. They expanded reforestation efforts, shifted more land into national and state forests, and explored schemes for moving rural residents out of the cutover (including to seemingly unlikely places like central Alaska). Collectively, these changes suggested the role state planning would have in determining land use and migration. In Louisiana, however, the New Deal period also revealed the extent to which privately-owned reforestation projects would become important during the post-World War II period.

²⁴ The federal government did establish two National Forests in the extreme northern portion of Minnesota (Minnesota, later Chippewa, NF in 1908, and Superior NF in 1909). The Minnesota state government, meanwhile, also began establishing a few small state parks and forests. Though these represent important bases on which the later shift toward widespread public ownership was based, at the start they represented relatively small land areas. Louisiana established its first state forest in 1923 (Alexander State Forest in Rapides Parish) and the federal government began purchasing the land that became Kisatchie National Forest in 1930. See Bachmann, *A History of Forestry in Minnesota, with Particular Reference to Forestry Legislation*; and Anna C. Burns, *A History of the Louisiana Forestry Commission* (Natchitoches, La.: Northwestern State College: 1968).

In this context, then, this chapter argues that agricultural migrants in the cutover region of northern Minnesota during the first forty years of the twentieth century represented the main solution to deforestation and deindustrialization for lumber companies, but ultimately became a problem for the New Deal state in this ecologically and economically marginal space. This chapter explores these two views of the cutover in Minnesota and Louisiana, suggesting the politically and economically malleable nature of one environmental space, and the varying role that migrants played in the development of the region. For both states I address lumber company practices in the disposal of their cutover acreage and the ideology of boosters in promoting this land for agriculture. These institutions interpreted the environment as bountiful and poor migrants as the ideal settlers. Next, I consider the consequences of this understanding; by the 1920s it became increasingly clear that neither stump-riddled land nor cash-poor farmers interacted with or transformed this hinterland as expected. Finally, I explore a reinterpretation of this ecological space by state and federal agencies and private industry (in Louisiana). This chapter does not catalogue a complete history of forestry, state-level New Deal politics, or the Civilian Conservation Corps, though they are each part of the story, but rather seeks to conclude this dissertation by describing the long reach of the industry in shaping future development even after “capital moved.” The experience of the regions in the 1930s also suggests the way that public expenditure and power were required to address the consequences of deindustrialization.

I. Lumber Companies, Boosters, and the Market Solution in Minnesota

As lumber companies “cut out” their stocks of timber in northern Minnesota they

employed a range of practices to market these lands to migrants as farmlands (thereby relieving themselves of tax obligation and earning another profit off the already logged land). One firm, the Pine Tree Manufacturing Company, with its sawmill based on the Mississippi River in Little Falls, Minnesota (about 100 miles upriver from Minneapolis) established a subsidiary firm called the Immigration Land Company (ILC) to manage the sale of its cutover acreage to settlers (mostly in Morrison, Cass, and Aitkin counties). In practice, though, the two companies operated out of the same office and little separated them in their day-to-day operations. Believing that the value of the cutover lands would continue to rise, ILC “never made a systematic effort to sell [its] ... cutover lands” and in 1912 they felt “confident that within a very few years these lands will be in good demand at increased prices.”²⁵ Still, ILC did sell lands. The firm marketed its lands through independent land agents who received a commission of around fifty cents on every acre sold to settlers. A letter from one agent who had sold ILC lands, F.C. Jeus, suggests that, at least some of the time, these firms and land agents knew they were taking advantage of potential settlers who had not laid eyes on the land they were being sold. In one letter to ILC, Jeus asked the firm for its price on a particular forty-two acres in Hubbard county, telling the firm that “I have purchaser for it now,” and then reminded them that “the land is worthless for farming or for timber.”²⁶

²⁵ Immigration Land Company, letter to W.D. Washburn, February 28, 1912, Box 1, ILC papers.

²⁶ F.J. Jeus, letter to Immigration Land Company, August 6, 1913, Box 3, ILC papers.



Figure 5.1: Map of Minnesota, with Cutover Region emphasized.
U.S. Geological Survey map in public domain, modified by author.

Other firms marketed their lands more forcefully than ILC, who rarely advertised in newspapers or other public forums. Some land and lumber firms maintained offices in larger cities, organized trips to view land, advertised in American and European newspapers, and even operated “model farms” to show prospective buyers the bounty that could be extracted from the land (though without mentioning that the farms employed large amounts of fertilizer and labor, and operated at a loss).²⁷ Even when potential settlers had visited the land they eventually purchased, the possibility for fraud could not be ruled out. One migrant, Patrick Naughton, successfully argued before the Itasca County District Court in 1916, that the Old Colony Land Company misrepresented

²⁷ Orlando W. Miller, *The Frontier in Alaska and the Matanuska Colony* (New Haven: Yale University Press, 1975), 52.

the land they sold him, finding that the plot was swampy when it had been advertised as land suitable for farming and grazing.²⁸ While savvy migrants (tenant farmers from the Midwest, for example) might purchase quality farmland in the region, land companies pushed land regardless of its features. As one historian has remarked, “although deliberate misrepresentation,” like the kind Naughton faced, “may have been rare, the companies were in the business of selling land, not enlightening the ill-informed or protecting the foolish.”²⁹

Beyond the instrumental and sometimes legally-questionable efforts of lumber and land companies to realize a profit from the sale of acreage it had already profited from once through the sale of timber, the development of this region was encouraged by a set of institutions promoting a social and economic ideology that imagined the progress of the region linearly and optimistically. This boosterism can be viewed most vividly in the newspapers of the region, which served not only to collect and report on economic development and political news, but also to promote further development itself. One newspaper, the *Bemidji Pioneer* (after 1903, the *Bemidji Daily Pioneer*) even acknowledged that some found the paper’s persistent boosterism problematic, and they defended their support for development in the region with further hyperbole. They wrote, “We have been an unsmiling recipient of the sobriquet of ‘hot-air’ artist, because our

²⁸ Civil Complaint, Patrick and Anna Naughton v. Old Colony Land Company (Itasca County District Court, Case #5893), Old Colony Land Company Papers (P1798), Minnesota Historical Society. On the behavior of cutover land sellers, see also John D. Black and L.C. Gray, “Land Settlement and Colonization in the Great Lakes States” U.S. Department of Agriculture, *Department Bulletin* No. 1295 (1925), esp. 85-88.

²⁹ Miller, *The Frontier in Alaska and the Matanuska Colony*, 52. Wisconsin cutover landowners formed the American Immigration Company in 1906 to cooperatively market and sell almost a half million acres to settlers. No such association of landowners I am aware of existed in Minnesota. See Lucile Kane, “Selling Cut-Over Lands in Wisconsin,” *Business History Review* 28, no. 3 (1954): 236-241.

claim that Beltrami County lands (though somewhat sandy) are unsurpassed.”³⁰

Newspapers, like the *Pioneer*, made an argument for migration to the cutover in two ways. First, and most frequently, they simply pointed to the real or potential agricultural productivity of the land (the quality of the soil and climate), which provided a glimpse at how the ecological space of the cutover was interpreted. Second, boosters made a social argument about opportunity in the United States, arguing that the cutover was an ideal place for people “of modest means” to settle.

The *Pioneer* argued that those who considered the cutover a vast wasteland were dead wrong. In an early editorial from the paper, the editors wrote, with spurious reasoning, “[T]he prejudice ... against the north on account of the alleged rigor of the winters there, is gradually wearing away. ... While the thermometer has been as low here as farther south, and perhaps a trifle lower, the dryness of the atmosphere makes the cold felt less than where the air is laden with moisture such as prevails farther south.”³¹

In addition to statements on the climate, the paper also published testimonials to the quality of the soil for farms in Beltrami County by running stories of individual successes. One article in 1906, for example, told of a farmer who “pulled a stalk from his field and exhibited it in the city [Bemidji]. The stalk was nine feet, ten inches high [2.9 meters]. ... The excellence of the crop attests to the value of Beltrami County cut-over lands for agricultural purposes.”³² Another article from the same month reminded readers, “Each succeeding season’s raising of grains and cereals in Beltrami County is forcibly demonstrating that the cut-over lands of northern Minnesota are as good as the

³⁰ “Beltrami County Coming into her Own,” *Bemidji Daily Pioneer*, September 20, 1909.

³¹ “Beltrami Growing: And the Prospects Are Good for a Bigger Increase this Year,” *Bemidji Pioneer*, January 9, 1902.

³² “Giant Beltrami Corn,” *Bemidji Daily Pioneer*, September 18, 1906.

best for agricultural purposes. ... From a field of ten acres of oats [one farmer] ... harvested and threshed an average of 101 bushels and 15 pounds, actual weight.”³³

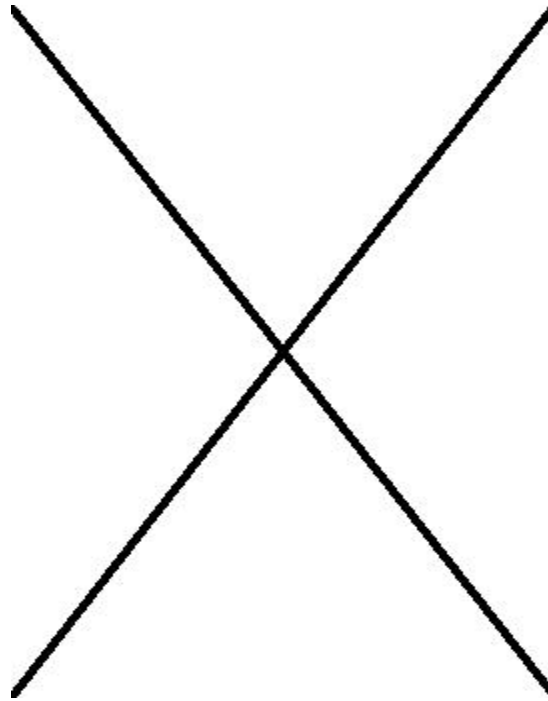


Figure 5.2: "Pyramid of Prosperity," *Princeton Union*, December 18, 1902.
Scanned and available through the Library of Congress and National Endowment for the Humanities
"Chronicling America" newspaper preservation website, <http://chroniclingamerica.loc.gov>.

In December of 1902, the *Princeton Union*, a daily newspaper published in Mille Lacs County, gave visual evidence to the bountiful agricultural future waiting for the region and graphically summarized the tenor of many an article over the next twenty years in the northern Minnesota press. The "Pyramid of Prosperity" showed logs reading "original industry, logging and lumbering," with corn, potatoes, pumpkins, oats, wheat, rye, beans, flax, and buckwheat layered on top (see *figure 5.2*). As immigration increased and crops grew, the paper argued this unproductive land would come to resemble a more familiar rural society. One editor wrote, "Land that you and I wouldn't look at ten years ago ... is in demand to-day, and in only a few years it will boast of near farm houses, big barns and all that goes towards making a desirable homes. ... Only a few years must slip

³³ "Record Breaking Yields on Cut-Over Farm Lands," *Bemidji Daily Pioneer*, September 6, 1906.

by and all that country will be taken up by the thrifty settler.”³⁴

The second claim about the cutover put forward by boosters was that the region was well suited for the “thrifty settler” identified by the *Princeton Union*. Writing in the decade immediately following Frederick Jackson Turner’s observation that 1890 marked the closing of the frontier, boosters of the cutover regarded their region as a frontier and an antidote to the social ills of urban life. In 1893, at the Columbia Exhibition in Chicago, Turner had argued famously for the centrality of the “frontier” as the major force in propelling and maintaining American democracy. As Turner explained, “American social development has been continually beginning over again on the frontier. This perennial rebirth, this fluidity of American life, this expansion westward with new opportunities, its continuous touch with the simplicity of primitive society furnish the forces dominating the American character.”³⁵ One letter to the editor of the *Minneapolis Journal* in 1902 captured the connection between independence and opportunity so central to Turner’s formulation: “Contrasted with a prairie region these cut-over lands furnish encouraging opportunities for the man of small means.” The writer continued, “The true philanthropist can find no better employment than in aiding the hundreds of homeless poor in the great cities to locate on these lands and become self-sustaining, useful producers, independent, clear-headed, strong-bodied citizens.”³⁶ The *Bemidji Daily Pioneer*, unsurprisingly, echoed this sentiment in its editorials and articles, by arguing, “No state in the Union offers better inducements to actual settlers, men of moderate or small means such as renters and laboring men who have saved up a few dollars, than Minnesota. And no part

³⁴ “The Cut-over Lands,” *Princeton Union*, April 21, 1904.

³⁵ Frederick Jackson Turner, “The Significance of the Frontier in American History,” in *The Frontier in American History* (New York: Henry Holt and Company, 1921), 2-3.

³⁶ “Praise of the Woodlands,” letter to the editor, *Minneapolis Journal*, August 26, 1902.

of the state offers greater opportunities than the Northern portion. ... At this time this new country is sadly in need of more farmers.”³⁷

Even as boosters were making their claims about the present and future development of the cutover lands, they were also contending with the development of the forestry movement in the United States. In fact, by the first decade of the twentieth century two National Forests had been established in Minnesota (Minnesota National Forest in 1908, later renamed Chippewa, and Superior National Forest in 1909) as well as several small state forests and parks. The tension between visions of land use rooted in reforestation and forestry or in agricultural development was not lost on cutover boosters. Still, in 1901, the *Bemidji Daily Pioneer* critiqued another northern Minnesota newspaper, the *Duluth News-Tribune*, for opposing the creation of a state park in the region, writing, “We understand that it is not the intention of the park promoters to include agricultural land in the deal. There are enough lakes, swamps and barrens in this upper country to make up the required acreage. There is no reason for this howl of ‘shutting out would be settlers.’”³⁸ However, in 1907 the *Daily Pioneer* seemed to ridicule the notion that large scale reforestation would be a good solution for the cutover: “These misguided enthusiasts who would reforest Northern Minnesota will need to hurry or face eternal failure. It is impossible to graft the pine tree on the cow, and equally difficult to cross the pine cone and the potato vine.”³⁹ By 1909, the paper already argued that this fight was in the past and had been won by agriculturalists. They wrote, “Time was, not so many years ago, when certain misguided individuals were wont to ridicule the

³⁷ “Great Opportunities for the Poor Man: Nowhere Can the Man of Moderate Means Do as Well,” *Bemidji Daily Pioneer*, July 9, 1907.

³⁸ “Preserving the Pines,” *Bemidji Pioneer*, April 11, 1901.

³⁹ “Northern Minnesota is Soon Coming into its Own,” *Bemidji Daily Pioneer*, July 12, 1907.

idea that cut-over pine lands were fit for anything but reforestation of pine trees. We were stubborn in our contention that this section of the state would yet rival any part of Minnesota for productiveness of its fertile acres, and this prediction is being born out by actual results, more forcibly every year.”⁴⁰

Though the hyperbole of the cutover press cannot help but seem both a bit naïve and even darkly humorous with the benefit of hindsight, in many ways the boosters did have reason to be optimistic. To a keen observer, population growth in northern Minnesota suggested that migration could confound reforestation efforts. Beltrami County’s population, to take a “typical” cutover county, nearly tripled between 1900 and 1930, to 27,079, and while Cass and Hubbard counties each had smaller total populations, their populations also roughly doubled during the first two decades of the twentieth century. St. Louis County, home to the Mesabi Iron Range and the important port city of Duluth (on Lake Superior) had the highest population in the cutover region by a wide margin, however the vast majority of the residents lived in Duluth or in the mining towns to the north (Hibbing, in particular). Nevertheless, St. Louis County’s agricultural hinterland also experienced population growth (see *table 5.3*). It is not easy to determine where these migrants came from as they settled the cutover counties, but U.S. Census data does reveal the large number of Scandinavian immigrants who settled in the northern counties. In Beltrami County, for example, in 1910 and 1920 the Census showed that over one quarter of the population was foreign-born. Moreover, over sixty percent of all foreign-born persons living in the county during both of those censuses were from Norway or Sweden (see *table 5.4*). While some had moved to Minnesota at first to work in the lumber or iron ore mining industries and later settled on farms, others came directly

⁴⁰ “Boosting a ‘Good Thing,’” *Bemidji Daily Pioneer*, November 11, 1909.

to the region as a result of advertising in the foreign and American urban press.

Table 5.3: Population of selected northern Minnesota counties, 1900-1930					
	Beltrami	Cass	Hubbard	St. Louis^s	All Minn.
1900	11,030	7,777	6,598	82,932	1,751,394
1910	19,337 [#]	11,620	9,831	163,274	2,075,708
1920	27,079	15,897	10,136	206,391	2,387,125
1930	20,707 [@]	15,591	9,596	204,596	2,563,953

^s St. Louis County is home to the city of Duluth, as well as significant iron ore mining towns, making the population higher relative to the amount of farmland in the county (see Table 3).

[#] Beltrami County lost 1,029 square miles (17.5%) of territory between 1900 and 1910 as a result of the creation of Koochiching County.

[@] Beltrami County lost 1,775 square miles (36%) of land between the 1920 and 1930 census through the creation of Lake of the Woods County, meaning that some population drop was due not to outmigration, but rather a new census district.

Source: U.S. Census Bureau. Total Population, 1900-1930. Prepared by SocialExplorer.com.

Table 5.4: Foreign-born population, Beltrami County*, 1890-1940					
	Total Population	Foreign Born (% of total)	Norway	Sweden	Canada and Newfoundland
1890	312	162 (51.9%)	112	19	25
1900	11,030	3,189(28.9%)	1,478	669	603
1910	19,337	5,237 (27.1%)	1,934	1,256	930
1920	27,079	5,324 (19.6%)	1,840	1,421	711
1930	20,707	2,656 (12.8%)	1,009	604	329
1940	26,107	2,255 (8.6%)	856	484	289

*See Table 1 for explanation of Beltrami County's shrinking area during this period.

Source: U.S. Census Bureau. Total population; foreign-born population by birth, 1890-1940. Prepared by SocialExplorer.com.

II. Cracks in Minnesota's Market Solution: Stumps and Capital

As migrants headed toward the cutover and newspapers like the *Bemidji Daily Pioneer* pointed to the abundance of the region, problems with the “market solution” for the cutover began to materialize. Like the boosters’ own claims about the potential of the region, these problems fall into two interrelated categories: the physical conditions of the cutover, and the social group that boosters hoped to attract (“men of modest means”). An excellent example of the first type of problem was a central feature of this environment and a prominent obstacle to agriculture in the cutover: stumps.

Left behind by lumber companies, tree stumps were costly and time consuming to

remove for farmers who often had little capital. A humorous and apocryphal 1909 *Princeton Union* article told of a local man's decision to sell his "mechanical mule," his automobile, because of its impracticability. In the story, the man's brakes fail as he is taking a drive with his father-in-law and he is forced to swerve into a meadow in an attempt to slow the car. After crashing into a stump and pulling up its roots, which threw the men into the field and ended their harrowing ride, the driver's father-in-law turned to him and remarked, "Erick, my boy, there is no reason whatever in your going so far from home to do stump pulling. You would do me a favor by clearing that piece of cut-over land that I own."⁴¹ Another joke originally from the *Detroit News*, and re-printed as far away as Louisiana, took up the same themes:

Earth in the upper peninsula is so kind that, tickle her with a hoe and she laughs with a harvest, but there are some drawbacks it seems. A farmer down in Au Train [Michigan] put out cabbage one year, and grew perfectly marvelous heads weighing, everyone of them, forty pounds or less, but doggone the luck, next year the piece was just like cut-over land again, and it took the farmer all season to clean out the cabbage stumps.⁴²

These jokes, of course, turned on the fact that removing stumps was a costly and labor-intensive process. Even with a crew of workers, tools, and a horse, pulling only a few stumps in a day could be a difficult task (made even harder in the winter when the ground was frozen). As one cutover farmer from Minnesota later recalled, "Well, you do well, you know, a couple of men do well to pull a couple stumps a day."⁴³

In 1908, a resident of Hines, Minnesota, a small town about twenty miles northeast of Bemidji, in Beltrami County, made a proposition for speeding the clearing of stump lands. Simply put, he said, "We want the State of Minnesota to furnish, at the

⁴¹ "Sells His Mechanical Mule," *Princeton Union*, November 11, 1909.

⁴² "Farmer's Hard Luck," *Colfax Chronicle*, February 28, 1920.

⁴³ Frank Werthner, interview by John Esse with William Rajala, May 10, 1977, transcript, Minnesota Historical Society, 6.

lowest possible cost, to actual settlers, dynamite enough to transform this country, in five years, from a wilderness of stumps and slashings into one of the richest farming and dairy countries on earth.”⁴⁴ Quickly given the nickname “Dynamite” Charles Carter by the *Daily Pioneer*, he went on to explain in a “characteristic ‘boom’ interview” that “[b]y the passage of this law I am firmly of the belief that the one bane of the farmer on the cut-over lands (removing stumps) will be removed to a larger degree, and the country in Beltrami and adjoining counties will be the Mecca for all kinds of people desiring good homes on agricultural lands.”⁴⁵ Carter was hardly a neutral observer, or even a small landowner in the region. In fact, the *Daily Pioneer* reported that he owned over 20,000 acres of cutover land in Beltrami County, making the dynamite bill important if he hoped to get settlers to buy his land. Even after the state legislature decided not to fund the program, the newspaper did not drop the issue of using dynamite to remove stumps.⁴⁶ A year after the “dynamite bill” failed to pass the legislature, it penned an editorial titled, “Why Not?” In the article they argued, “Why not ... divert all the money usually spent for explosives to the purchase of dynamite, and use all the dynamite to blow out stumps on cut-over lands, thus making them available for agriculture? ... Supposing the entire north country would celebrate by blowing stumps out of the ground on each and every Fourth of July for the next ten years how many acres could be cleared in this manner!”⁴⁷ Though dynamite might have aided the process of stump clearing, Carter and the newspaper clearly idealized this process. One migrant who cleared land recalled that even

⁴⁴ “State Should Aid in Giving Cheap Dynamite,” *Bemidji Daily Pioneer*, December 10, 1908.

⁴⁵ “Charles S. Carter Talks of Cheap Dynamite Bill,” *Bemidji Daily Pioneer*, February 23, 1909.

⁴⁶ “‘Dynamite Bill’ Killed,” *Bemidji Daily Pioneer*, April 17, 1909.

⁴⁷ “Why Not?” *Bemidji Daily Pioneer*, May 3, 1910. In addition to their efforts to improve the cutover through state aid in the form of dynamite, cutover counties succeeded in securing funding for drainage ditches to improve swampy land. By the 1930s, the main legacy of these projects was their contribution to the indebtedness of cutover counties.

after the use of dynamite, a stump was left in three or four large pieces and roots remained in the ground, and removing them required more work. At the end, he recalled, “I had just as many piles of roots as I had of those brush when I cleaned it.”⁴⁸

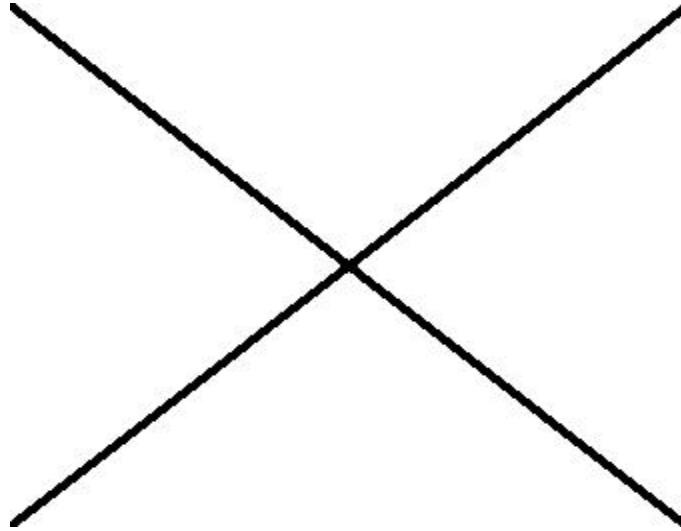


Figure 5.5: Cutover Stump Lands, 1914 (negative no. 4416-B). Minnesota Historical Society, Visual Resource Database, <http://collections.mnhs.org/visualresources/search.cfm?bhcp=1>.

While the state subsidization and widespread use of dynamite to clear stumps might have aided the development of the region, this environmental feature was not the only barrier to agricultural development facing cutover migrants. Clifford Alghren, the son of Finnish immigrants, and who grew up on a farm in Lake County in the early twentieth century, recalled that his family would clear “about two or three acres, depending on how much time was available” each year. They would use a team of horses to remove stumps, but it was the rocks that Alghren later recalled as the major struggle to clear and the most difficult work:

When we plowed and harrowed we had to haul out the rocks. And that was a real job. If you ever traveled in that country you’ll see the long, long fence rows of rocks. All of the rocks came out of these little fields. Hauling rock was heavy

⁴⁸ William Kaukola, interview by Robert Wheeler, February 17, 1977, transcript, Minnesota Historical Society, 37-8.

work. Some of the rocks which were too large to lift, had to be skidded with a chain and horses. If you removed the rock consistently for a few years, most of the field would eventually be free of rocks, and easy to work with. We would treasure these fields because of all the work that went into them and we'd rotate the crop to keep the soil productive.⁴⁹

Alghren's family, by the 1930s had cleared approximately forty acres of their ninety-acre farm.

Table 5.6: Improved and unimproved farmland, selected northern Minnesota counties, 1900-1930										
	Beltrami^{&}		Cass		Hubbard		St. Louis		All Minn.	
	<i>Farmland</i>		<i>Farmland</i>		<i>Farmland</i>		<i>Farmland</i>		<i>Farmland</i>	
	<i>Total acres</i>	<i>% improved</i>	<i>Total acres</i>	<i>% improved</i>	<i>Total acres</i>	<i>% improved</i>	<i>Total acres</i>	<i>% improved</i>	<i>Total acres</i>	<i>% improved</i>
1900	186,716	12.7	104,577	19.7	99,143	19.8	59,950	19.0	26,248,498	70.3
1910	223,764	14.9	147,081	27.4	151,984	36.7	272,995	15.1	27,675,823	71.0
1920	459,487	19.3	240,733	31.0	191,996	41.8	402,351	23.2	30,211,758	71.1
1930	265,842	28.1*	293,300	32.3*	197,052	39.2*	444,111	26.7*	30,913,367	63.1*
^{&} See Table 1 notes for explanation of Beltrami County's decreasing square acreage for context of these statistics. [*] The U.S. Census stopped dividing farmland between "improved" and "unimproved" farmland in the 1930 census. The 1930 number here shows "percentage of farms in crops." Source: U.S. Census Bureau. Improved/Unimproved Farmland, 1900-1920; Farmland By Type, 1930. Prepared by SocialExplorer.com.										

As Alghren's story reveals, the difficulty in clearing land in the cutover was reflected in the low percentage of "farm land" that had been "improved" relative to the rest of Minnesota. In fact, Alghren's family had a relatively high percentage of cleared land by regional standards. In Beltrami County, just 12.7 percent of farmlands in 1900 were improved, according to U.S. Census data. Though the total acreage in farms more than doubled in Beltrami County over the next twenty years, the percentage of improved farmland only increased to 19.3 percent of the total. For Minnesota as a whole, in contrast, during the first three censuses of the twentieth century the percentage of improved land was never below 70 percent (see *table 5.6*). Dismal figures of improved land could be even worse in parts of the cutover, and census figures themselves could be

⁴⁹ Clifford E. Ahlgren, interview by Newell Searle, May 11, 1976, transcript, Minnesota Historical Society, 13-14.

exaggerated. A township in Lake County visited by government investigators in 1926 and 1931 revealed, for example, “The census for 1930 shows 2,043 acres in farms in the township, but interviews with settlers revealed that only 892 acres were owned by operating farmers and only 138 acres were cleared.”⁵⁰

Compounding the physical problems with stumps in the cutover were many settlers’ limited amount of capital. Simply, many were too poor to make the costly improvements that might have made farming the cutover profitable. One 1916 U.S. Department of Agriculture report written with prospective settlers of the cutover region in mind, took up this issue of land clearing and capital scarcity. The authors reported, “Ordinarily the cost of clearing land ranges from \$20 to \$60 per acre, depending mainly on the kind, condition, number, and size of stumps; the acreage to be cleared; the amount of wood and brush that must be removed or burned; and the quality and condition of the soil.” In 1917, Immigration Land Company recorded its average selling price for land in northern Minnesota at \$12.95 per acre, meaning that clearing the land could cost as much as four and a half times as much as the purchase price of the land itself.⁵¹ The U.S. Department of Agriculture report pointed out that these “initial capital requirements to develop a cut-over farm are often overlooked by the inexperienced settler or are purposely discounted by the land agent who wants to make a sale.”⁵² They continued by recommending the use of a stump puller or dynamite to clear land and argued that it was a bad idea to settle on land without sufficient capital. One migrant recalled, though, that “We started clearing land. ... And every year we got more and more land cleared out and

⁵⁰ Blakey, *Taxation in Minnesota*, 130-1.

⁵¹ “Logged Off Land Sales, 1917-1919,” Box 6, ILC papers.

⁵² Hartman and Black, “Economic Aspects of Land Settlement in the Cut-Over Region of the Great Lakes States,” 45.

as we went along we'd add on one more cow. ... But everything was done by hand – we didn't have nothing; we didn't even have a horse – there wasn't a horse in the country.”⁵³

Though the easiest way for a farm to secure more income (and more working capital for stump removal) was to cultivate more acreage, the high costs of clearing that very farmland created a difficult conundrum for settlers. In this context, boosters' claims about the ideal nature of the land likely seemed a cruel joke to poor migrants. The *Minneapolis Journal* paraphrased a letter they received pointing to this very tension:

The *Journal* is in receipt of an interesting letter from a man who took the advice so freely proffered to the poor of the city to get out on the farms, to get back the land. ... After one year's experience he is like the man who said: 'When I came to this country twenty years ago I hadn't a rag on my back; now it's all rags.' His trouble is, of course, lack of capital. Not having horses or machinery he was able to cultivate this year only an acre-and-a-half of land, and an unusually early frost ruined most of the crop on that small patch.⁵⁴

The physical properties of the cutover combined with the social composition of migrants made the transition to a landscape of prosperous family farms almost impossible. In addition to farmers' lack of capital and the high costs of land improvement, broader changes in American agriculture increasingly made it difficult for small farms – whether in the cutover or in the broader Midwest – to turn a profit. The depressed prices of agricultural staples throughout the 1920s and the transition to large corporately organized farms relying on wage labor, what Carey McWilliams described as a system of “factories in the field,” signaled the economic difficulties facing small farmers on marginal lands.⁵⁵

⁵³ John Ollila, interview by Robert Wheeler, May 5, 1976, transcript, Minnesota Historical Society, 2.

⁵⁴ “No Help for Him,” *Minneapolis Journal*, September 6, 1902. After the First World War, the federal government appropriated money for disabled veterans to establish agricultural colonies. Many of these veterans' experiences working cutover land in northern Minnesota seem not to have differed much from that of the writer to the *Minneapolis Journal* a decade and a half earlier. See Bill G. Reid, “Colonies for Disabled Veterans in Minnesota,” *Minnesota History* 39 (1965): 241-251

⁵⁵ Carey McWilliams, *Factories in the Field: The Story of Migratory Farm Labor in California* (Boston: Little, Brown, 1939).

Additionally, the decline of the lumber industry (and mechanization in the iron ore mining industry) reduced the size of a potential local market for cutover agriculture's products. Thus, when the *Bemidji Daily Pioneer* or other institutions promoting cutover agriculture pointed to the bounty that *could* be grown in the region, they missed the point. By suggesting that farming was technically feasible they did not capture the way that the environment interacted with increasingly integrated capitalist markets.

Boosters' insistence that the cutover would become a premier region for Minnesota farming, though it drew many migrants into difficult situations, also ironically provided some migrants with work. The development of roads and drainage ditches throughout the northern counties became an important source of income for many cutover farm families. When one oral history interviewer asked William Kaukola, a Finnish immigrant who grew up on a cutover farm in northeastern St. Louis County, where his family's income came from, Kaukola replied, "well – there was a lot of road work, too." The lumber industry also formed an important (though declining) source of income for cutover families, as logging occurred in the winter when little farm work could be accomplished anyway. Kaukola's father would work in the camps in the region during the winters.⁵⁶ Another Minnesota resident who grew up on a cutover farm, John Ollila (a Swedish immigrant), also recollected the importance of public employment for his father during the early twentieth century. He recalled how little money came in from the small amounts of milk and cream he was able to sell and then added, "He had to hire out because he didn't make any money on farming – no, at that time, you know, there was no money in that. ... And when all those roads were made then in the summertime, too, he

⁵⁶ Kaukola, interview, 38.

took contracts of making these roads – making the ditches on the roads.”⁵⁷ Building public infrastructure, then, subsidized the incomes of some residents for whom the dream of a self-sufficient farm was unrealized.

III. A New Deal for the Minnesota Cutover

By the late 1920s the social and ecological contradictions in cutover farm development had culminated in persistent rural poverty, stagnant or declining populations, abandoned lands, and massive tax delinquency. These conditions became politicized in the 1930s in the context of the New Deal, which ignited investigations into the sources of depressed agricultural conditions and rural poverty across the United States. When government social scientists, economists, agronomists, and foresters looked north at the cutover region in the Great Lakes states during the Great Depression they found two problems to be especially troubling: tax delinquency and rural poverty.⁵⁸

As we have seen, though lumber firms and land companies were able to sell some of their holdings to settlers during the first two decades of the twentieth century, collectively they still controlled vast acreage, but increasingly chose to let this land turn tax delinquent instead of paying the taxes owed on the land. At the start of 1931, about forty-four percent of the total taxable area in the cutover region of Minnesota was delinquent (about 9 million acres). In Beltrami County, conditions were even worse, with over sixty-six percent of the total taxable land area delinquent (see *figure 5.7*).⁵⁹

⁵⁷ Ollila, interview, 6.

⁵⁸ James Kates, *Planning a Wilderness: Regenerating the Great Lakes Cutover Region* (Minneapolis: University of Minnesota Press, 2001). Kates’ study explores the first cohort of writers and foresters who began to dissent from the boosters’ ideology and called for reforestation and land-use planning in the region.

⁵⁹ Blakey, *Taxation in Minnesota*, 12, 117.

The records of the Immigration Land Company (ILC), a subsidiary of the Pine Tree Manufacturing Company (discussed in Chapter 2 and mentioned earlier in this chapter), shed light on the decisions of lumber firms to simply abandon their land. A 1926 internal letter at ILC, for example, showed the contradictory tendencies running through the thoughts of a large cutover landholder. R.D. Musser described a conversation with some ILC executives owners over “certain lands ... for which there is no immediate sale and it may be some years before there will be any opportunity to dispose of these lands. These lands are more suitable for growing timber than for agricultural purposes, as they are sandy and rocky and would not be profitable to cultivate.” Continuing, Musser described how the firm had maintained the policy “not to have any of our lands in the delinquent tax list class.” However, these lands were costing the company from 35 to 40 cents per acre per year to carry on its books, so Musser proposed giving these lands to the state of Minnesota, “in that way do[ing] something practical for reforestation,” and as importantly, “off-set the criticism that is generally made against lumbermen for their lack of interest after they have gotten all the benefits from the timber that has been removed from these cut-over lands.” In this letter, Musser thus acknowledged the problem in attempting to sell timber lands to farmers, addressed the problem of taxation facing the firm, and ultimately proposed letting the state take care of the problem in the form of reforestation. Still, in closing his letter, Musser retained the belief that selling cutover lands could be profitable. He wrote: “With the splendid rain that the northern part of Minnesota has received the past week and the great improvement in the farming situation, we feel that there will be a fair demand for lands this year and, of course, much better than the preceding year.”⁶⁰

⁶⁰ R.D. Musser, letter to F.S. Bell, June 18, 1926, Box 93, Laird, Norton papers.

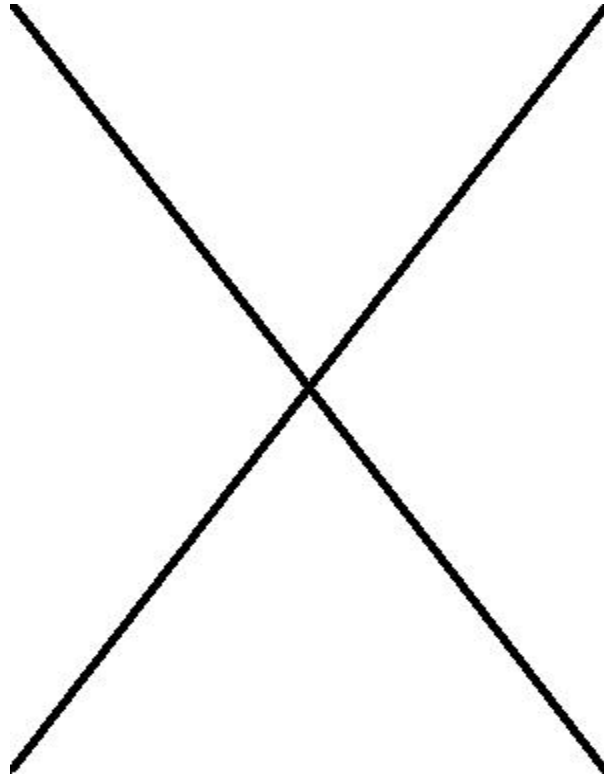


Figure 5.7: Tax Delinquent, Non-Taxable, and Taxpaying Lands in Beltrami County.
From Blakey, *Taxation in Minnesota*, 124.

When F.S. Bell replied to Musser's analysis, he cut right to the chase: "Assuming you have complete knowledge as to these lands, I should be inclined to stop paying taxes on those where there was no prospect of sale on account of their quality or location." As for reforestation, Bell replied, "I would be glad to have the company turn over to the State of Minnesota a certain body of lands for reforestation, provided, first that the state wants them, and second, that they are so situated and reasonably blocked [connected] so that they really have some value for the purpose of reforestation." Self consciously, Bell added, "I do not think we should get much glory, and we might get laughed at if we tried to turn over to the state lands which were plainly not worth anything to us, and not worth much of anything for reforestation because so scattered or so poor." Despite these reservations, Bell, saw reforestation by the state as a positive step and he later speculated

that changes in tax law could give an incentive for firms to invest a little in reforestation on their own.⁶¹

By 1928, the Immigration Land Company arranged to sell about 400 acres of cutover land in Cass County to the state (for \$5.50 an acre) for the purpose of adding to the Cass Lake Forest Reserve. This sale, however, did not stem the losses “sustained in the conduct of the company’s affairs” during the 1920s. From 1921 to 1925 the ILC had paid its taxes, and lost a total of \$199,514.16. After ceasing to pay the state, from 1926 to 1930, the ILC lost only \$40,995.32.⁶² Though effectively eliminating its tax burden allowed ILC to reduce its losses, other forces kept the firm in the red. During 1930, for example, they sold a total of 1,371.07 acres of land (at an average of \$14.26 an acre). However, during the same period, they took 4,636.77 acres back onto their accounts as a result of foreclosures (some for agricultural land and some for mineral rights). Thus, during 1930, the land held by the ILC actually increased from 167,205.74 acres to 170,471.44 acres.⁶³ Looking back on the 1920s from 1936, R.D. Musser described the shifting fortunes of the ILC. He wrote:

Right after the World War, lands in Minnesota were in much demand and for five years, this company sold a large amount of land at good prices on contracts that ran for five to seven years at 6%. After 1924, the demand for land declined and ever since that time, it has been a tremendous undertaking to carry these lands and make sufficient sales to take care of office expenses. . . . When the tax burden got so heavy and the sales fell off, there was no income left, or reserve to draw on to meet these tax obligations, and for the past eight years, we have been unable to pay these taxes, which in the aggregate now far exceed the value of the land.”⁶⁴

In 1941, the ILC dissolved. The principle assets of the firm (cutover land) had been taken

⁶¹ F.S. Bell, personal letter to R.D. Musser, June 21, 1926, Box 93, Laird, Norton papers.

⁶² “Losses Sustained in the Conduct of the Company’s Affairs,” Box 93, Laird, Norton papers.

⁶³ Report to the directors of the Immigration Land Company, May 9, 1931, Box 93, Laird, Norton papers.

⁶⁴ R.D. Musser, to the stockholders of the Immigration Land Company, May 14, 1936, Box 93, Laird, Norton papers.

over by the state and the acreage it still owned was essentially worthless. Though the ILC's 170,000 acres represented only a small portion of the total cutover acreage that reverted to the state during the 1930s, its early belief in the ability of the market to rebound, its small efforts at reforestation (via the state), and ultimate demise shares much in common with other large landholders in the region.

In addition to attesting to the inability or unwillingness of lumber companies and settlers to pay taxes, the high rates of delinquency meant that those who did pay taxes contributed at very high rates on the assessed value of their land in order to pay for county services. Even with higher rates of taxation, cutover counties during the late 1920s and 1930s required state aid to meet financial obligations. The distribution of abandoned lands, meanwhile, fell across cutover counties unevenly, leaving some rural families highly isolated but the county still responsible for maintaining roads, schools, and other services. In one study completed during the depression, thirteen "isolated" families in St. Louis County each had an average of 1.54 miles of roads maintained and snowplowed for their use by the county at an average cost of \$90.88. Most of these families were unable to pay their taxes and the average tax collection for this sample in 1932 was only \$7.03. The combination of land abandonment and tax delinquency combined to create a massive shortfall in revenue for St. Louis County.⁶⁵ That many of these families were unable to meet their obligations to the county government is not surprising; a study of farm families in ten cutover counties in Minnesota, Michigan, and

⁶⁵ Oscar B. Jesness and Reynolds I. Nowell, *A Program for Land Use in Northern Minnesota: A Type Study in Land Utilization* (Minneapolis: University of Minnesota Press, 1935), 141. One irony of the lumber companies' strategy of selling the cutover lands to prospective farmers is that this may have led to or increased their desire to abandon the land and let it revert to the state. As migrants did move north and plant themselves on former lumber lands, the resulting population increases required a larger tax base to provide for roads and schools, a fact which may have hastened their decision to abandon the land. This, in turn, increased the tax burden on migrants.

Wisconsin revealed, for example, that in 1930 only 18.9 percent had telephones, 3.4 percent had indoor plumbing, and 14.4 percent had electricity.⁶⁶ Cash incomes, literacy rates, radio ownership, and other measures of economic well-being charted in the study also confirmed that the cutover counties lagged behind the rest of Minnesota.

The high rates of tax delinquency meant that under Minnesota law, the state would resume ownership of millions of acres of cutover lands during the 1930s. By the mid-1930s, in fact, Minnesota would own an additional 9 million acres of land, in excess of the 4 million acres that were already publicly owned. This shift made the state government the region's largest landowner for the first time since it began disposing of northern lands during the mid-nineteenth century and this situation provided a clear opportunity to reshape land use in the region. In 1932, Governor of Minnesota Floyd B. Olson, a former member of the International Workers of the World (IWW), appointed a Committee on Land Utilization to investigate and propose solutions to the social and environmental problems of the cutover. The Committee laid out recommendations for the cutover in a final report produced in early 1934, titled *Land Utilization in Minnesota: A State Program for the Cut-Over Lands*. The document suggested a major shift in attitude toward the potential uses of cutover lands: away from market agriculture and toward state owned and managed forests. Governor Olson forcefully captured this shift in the report's forward. He wrote: "[T]he *laissez-faire* policy of the past, which permitted unchecked exploitation of the natural wealth of northern Minnesota and unguided, haphazard settlement, has resulted in the almost complete exhaustion of once rich resources, and that with exhaustion of these resources many communities in the region have been left

⁶⁶ C.P. Loomis, Joseph J. Lister, and Dwight M. Davidson, Jr., "Standards of Living in the Great Lakes Cut-Over Area," U.S. Department of Agriculture, Farm Security Administration, and Bureau of Agricultural Economics, Social Research Report no. 13, Washington, D.C., September 1938: 5.

economically stranded.” In response to this crisis, the governor argued, “The state must assume a more direct responsibility in rehabilitating the financial, political and social life of the communities in the cut-over region.”⁶⁷ The Committee’s text worded the situation slightly differently, but agreed with the governor who appointed it, writing, “The whole problem comes down to one of careful public planning and control.”⁶⁸

Ultimately, the Committee argued, the principle and most beneficial uses of the public domain in the northern portions of Minnesota rested in reforestation, recreation, and water conservation. Though recreation was becoming important in the region during the 1910s and 1920s, it still formed only an ancillary part of the economy, but as car ownership increased, urban Minnesotans headed in larger numbers to the north for their leisure time. Agriculture, in this new reconfiguration of the cutover, still had a place, but a severely conscribed one. The Committee first pointed out, “The surpluses of farm products ... and other produce suggest that there is very little need to open up more land for farming anywhere in the United States at present time.” Continuing, they explained that if farming more land became socially necessary, “there may be a small justification for a small controlled annual increase in the number of farms.” In that case, they proposed that the state would (again) “be justified in selling some of its better agricultural land to experienced farmers at suitable price.” Crucially, however, the Committee described:

If, when that time comes, agricultural settlement can be confined to areas of good soil and favorable location with respect to roads, schools, and markets, there will be a better opportunity for the individual farmer to succeed and more likelihood that public expenses will be kept low than there has generally been in the past. The public will also be the gainer if unwise settlement is avoided.⁶⁹

⁶⁷ Floyd B. Olson, forward, *Land Utilization in Minnesota: A State Program for the Cut-Over Lands*, v, vi.

⁶⁸ *Land Utilization in Minnesota*, 25.

⁶⁹ *Ibid.*, 20.

In other words, state planning would remain an important part of any future use of the land, even if agriculture eventually became necessary on this marginal land. The Committee's report served as a first step in the reorientation of public policy in northern Minnesota and demonstrated that the era in which unplanned smallholder agriculture dominated the cutover (and society's understanding of the cutover) had come to an end.

This reconceptualization of the marginal economic spaces taking place in Minnesota was not isolated from national trends. The National Resources Board, appointed by President Roosevelt to undertake a study of the problems related to natural resources in the U.S. began its 1934 report by arguing, "Our national democracy is built upon the principle that the gains of our civilization should be administered for the benefit of the many rather than the few; our priceless soil, water, minerals are for the service of the American people for the promotion of the welfare and well-being of all citizens."⁷⁰ The Board's report placed northern Minnesota in a category of "areas in which it appears desirable to encourage permanent retirement of a substantial part of the arable farming and develop constructive use of the land not to be in farms."⁷¹ The Board found that the problems that the Minnesota state government reported in the cutover in the northern part of the state were not especially unique, and, in fact, farmers on cutover lands in much of Appalachia, the Pacific Northwest, the Adirondacks, and east Texas and Louisiana faced much the same situation. As the *Report* argued, "The poor land areas are replete with social and economic maladjustments. ... Incomes are low, credit is expensive, the people are often poorly housed and ill fed; educational and cultural opportunities are meager,

⁷⁰ National Resources Board, *A Report on National Planning and Public Works in Relation to Natural Resources and Including Land Use and Water Resources with Findings and Recommendations* (Washington, D.C.: GPO, 1934), v.

⁷¹ *Ibid.*, 176

while governmental services are either at a minimum or provided at high expense to both the community and the larger public.”⁷² Though Louisiana’s decline in lumber production came later than in Minnesota, the sheer scale of the industry in the state meant that considerable cutover acreage had accumulated by the 1930s, resulting in similar problems as those faced in Minnesota.

IV. Introducing the Louisiana Cutover

Across much of the country in the 1930s, unemployed journalists and writers joined the Federal Writers’ Project. Administered at the state level, many of the writers’ projects produced travel guides for prospective tourists to explore the states. Writers for the Louisiana Writer’s Project (LWP) compiled such a guide during the late 1930s, tramping across the state and encountering a landscape in northern and western Louisiana fundamentally altered by the lumber industry’s forty-year presence in the region. Four distinct images of the region emerge from notes of the (often anonymous) field reporters, offering an instructive snapshot of the region’s economic and ecological geography.

First, the notes’ sparse prose pointed to the wholesale abandonment of communities by the lumber industry in the state. Upon entering Longville, Louisiana, about thirty miles north of Lake Charles, and once the home of the Long-Bell Lumber

⁷² National Resources Board, *Report*, 175. A 1935 Federal Emergency Relief Administration report pointed to the same regions as “rural problem areas.” See P.G. Beck and M.C. Forster, *Six Rural Problem Areas: Relief—Resources—Rehabilitation: An Analysis of the Human and Material Resources in Six Rural Areas with High Relief Rates*, Research Monograph I (Washington, D.C.: GPO, 1935). At the same time that New Deal commissions and agencies pushed forward an alternative vision of marginal agricultural communities, the U.S. Forest Service also had a renaissance in social vision, as mentioned in Chapter 1. The Civilian Conservation Corps (CCC) carried out much of the work of these planners in rehabilitating degraded environments. On the development of the CCC at the national level, see Neil M. Maher, *Nature’s New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement* (New York: Oxford University Press, 2008). On the CCC in Minnesota, see Barbara W. Sommer, *Hard Work and a Good Deal: The Civilian Conservation Corps in Minnesota* (St. Paul: Minnesota Historical Society, 2008).

Company's mills, for example, one writer commented that it was "a splendid example of the 'ghost town' created by the lumber industry." Continuing, this writer described the town's dramatic transformation: "The town of Longville was founded ... in 1906 and a few years later had a population of two thousand, a bank and a post-office. Today the population in the original town is perhaps a dozen. ... There are no traces of the former mill except for a few bricks and concrete blocks, remains of the original mill foundations." Longville, one of the many mill towns that formed a site of conflict between lumber capitalists and workers during the 1911-1914 Louisiana timber war, essentially no longer existed. Looking beyond what the writer thought was "a truly grim reminder of this once active and prosperous community," they then examined the land around Longville. After noting a "deep slash" visible across the hilly portions of the land that constituted the only visible evidence of the logging railroad that once drew the "surrounding forests of virgin pine" to Longville, they concluded, "All that remains of the forests are the ugly black stumps that dot the land."⁷³

One hundred miles to the northeast of Longville, in the center of the state, the picture was as grim. In Atlanta, Louisiana, the Writer's Project found that the sawmill opened in 1906 by the Michigan-based Germain and Boyd Lumber Company had closed a decade earlier, in 1925. They noted that "the homes were of better construction than average houses supplied by mills, but these and the last vestige of the plant have disappeared and the site is now overgrown with small timber and brushwood. The railroad has been taken up and there remains very little signs of former activities."

⁷³ "Southwestern Louisiana towns and industry," Louisiana Federal Writers' Project notes, Louisiana Works Progress Administration collection, LOUISiana Digital Library <louisdl.louislibraries.org>. Some of the observations from the notes in this collection are included in the final product of the Louisiana Writers' Project, *Louisiana: A Guide to the State* (New York: Hastings House, 1941).

Twenty miles north of Atlanta, in nearby Dodson, a sawmill closed in 1910, and “with the lost of sawmill business the Dodson bank failed in 1925, and some of its larger business institutions moved away.” Finally, in another former sawmill town of Tannehill, the field reporter wrote, “The houses have long since disappeared and there are no activities at this time comparable to the former business.”⁷⁴

If at first this writer offered a vision of an empty landscape – devoid of people, along with capital – eventually they did come upon efforts to live on the cutover in the southwest corner of the state along U.S. Highway 171. In Gillis, “a former logging town containing some five hundred people during the height of the lumber activity,” and located between Longville and Lake Charles, they described that “the inhabitants of this section, as well as those who reside in the area around DeRidder are reluctant to leave their own homesteads. They eke, best they can, an existence from the barren soils of the cut over pine lands.” Less bleak, they also found that around Alexandria, in the center of the state and once at the heart of its lumber industry, that “the growing of truck farming has been given impetus by the owners of the cut-over lands and by the assistance of agricultural agents of railroads in educational work and marketing. ... Groups of mid-western states have located near Glenmora and Forest Hill during the last decade. Strawberries and sweet potatoes are the principle truck crops but a wide variety of crops are grown.”⁷⁵

⁷⁴ “Description and history of the Louisiana towns of St. Maurice, Atlanta, Tannehill, and Dodson, Louisiana,” Louisiana Federal Writers’ Project notes, Louisiana Works Progress Administration collection, LOUISiana Digital Library <louisdl.louislibraries.org>.

⁷⁵ “Description of small towns and agricultural communities surrounding Alexandria, Louisiana,” Louisiana Federal Writers’ Project notes, Louisiana Works Progress Administration collection, LOUISiana Digital Library <louisdl.louislibraries.org>.

The community abandonment and small-scale farming witnessed by the LWP also mixed with another distinct set of economic and ecological processes: reforestation. Leaving Longville, the abandoned and cutover community, an LWP writer travelled two miles up the main road through town and encountered a “very pretty scene in contrast to the foregoing cut-over land dotted with stumps.” They had stumbled onto the Long-Bell Lumber Company’s reforestation tract, “planted as an experiment,” and at the time of writing, about seven-years-old. Looking over the land, the writer was filled with optimism as he gazed into Longville’s future: “the dark shining green that extends away over the rolling countryside, with a promise of huge towering brown trunks that will some day bear the green canopy high into the air, which will offer employment to future citizens.”⁷⁶ Much larger than any private reforestation effort in the state, however, lay within the Forest Service’s new Kisatchie National Forest. Established in 1930, the forest ranged across the north-central portion of the state and, by 1936, comprised close to 500,000 acres of forest and cutover in Vernon, Grant, Rapides, Natchitoches, and Winn parishes.⁷⁷

In sum, ghost towns, stumps, cutover farms, private and public reforestation efforts, and some larger, still remaining mills defined the critical elements of the state’s deindustrializing lumber geography by the late 1930s. This combination made the state different from Minnesota where few private reforestation efforts existed and lumber production was even lower. But if some reforestation efforts dotted western and northern Louisiana by the mid-1930s, cutover lands still dominated the landscape in pure acreage. In 1930, State Forester V.H. Sonderegger estimated that of the 18.9 million acres of

⁷⁶ “Southwestern Louisiana towns and industry,” Louisiana Federal Writers’ Project notes, Louisiana Works Progress Administration collection, LOUISiana Digital Library <louisdl.louislibraries.org>.

⁷⁷ Anna C. Burns, *A History of Kisatchie National Forest* (U.S. Forest Service, 1994), 11.

forestland in the state, cutover pinelands accounted for 6.8 million acres. When cutover hardwood and cypress lands were included, total cutover acreage in the state reached 10.7 million acres, or over 55 percent of all forested land.⁷⁸ In Beauregard Parish – an important lumber-producing parish in the western part of the state and home to Longville – the Louisiana Tax Commission calculated in 1932 that of the parish’s total 735,644 acres of land, an amazing 642,718 acres (87%) were classified as cutover pine lands.⁷⁹ Likewise, in Vernon Parish, immediately to the north of Beauregard, 84 percent of land was classified as cutover land. In Washington Parish, the home of the Great Southern Lumber Company’s mills, cutover lands represented only 51 percent of land area (211,363 acres), but still dwarfed the 88,509 acres of reforestation tracts.⁸⁰

As cutover acreage bloomed during the first decades of the twentieth century, both number of mills in operation and total production continued a long slow slide after about 1910, with a reduction from over 4 billion b.f. produced in 1913 to just over 2 billion b.f in 1928 (the last year before the onset of the Great Depression). By 1932, the cut had fallen to just 500 million board feet.⁸¹ The deindustrialization of the lumber industry and the development of the cutover in Louisiana bears many similarities to the changes taking place in Minnesota at the same time. When lumber firms in the state imagined the cutover, they too, pictured a booming agricultural hinterland. And as in Minnesota, this vision foundered on its very assumptions about people and the environment. In contrast, however, a small group of Louisiana lumber capitalists began to see opportunities for private reforestation and the creation of “timber farms,” an idea

⁷⁸ V.H. Sonderegger, *Classification and Uses of Agricultural and Forest Lands in the State of Louisiana and the Parishes*, Louisiana Department of Conservation, Division of Forestry, Bulletin no. 24, 1933: 19.

⁷⁹ *Ibid.*, 28.

⁸⁰ *Ibid.*, 81, 82.

⁸¹ Steer, *Lumber Production in the United States, 1799-1946*, table 4.

crucially important for the future of the southern lumber industry. Capitalists in Louisiana began to see a way to turn (yet another) profit in lumber on private land.

V. Selling and Farming the Louisiana Cutover

After 1910, and just as the lumber industry reached peak production in the state, cutover agricultural boosterism became increasingly visible in the newspapers of the northern and western parts of Louisiana. As in Minnesota, the press served an important function in propagandizing the view that a boom in cutover land development was right around the corner and would provide some of the best opportunities for “common men.” In August 1910, for example, the Winnfield, Louisiana-based *Comrade* predicted, “The time is close at hand when the time of immigration will flow in an ever-increasing volume into this State of so many splendid and attractive possibilities.” The article also pointed to the Long-Bell Lumber Company’s operation of a demonstration farm and argued it was a “striking and successful example of what can be achieved on these lands by the spirit of enterprise and the application of intelligent industry to their cultivation.”⁸² A letter to the editor of *The Colfax Chronicle* in Grant Parish echoed the sentiment of *The Comrade*, and looked forward to the changes its author saw coming to his region: “As our forests are manufactured into lumber our lands are left denuded, and are now considered almost worthless. In these lands lie the most wonderful possibilities for Grand parish. ... Let our lands be put into cultivation. When the timber is cut off let something else be planted.” The writer concluded, “We have the soil, we have the climate, we have the

⁸² “Cut-Over Lands,” *The Comrade* (Winnfield, La.), August 12, 1910.

natural advantages, we have the balmiest breezes, we have few obstructions, and in fact, nature has smiled on Grant parish in the most bountiful manner.”⁸³

This letter writer was not alone in assuming that “nature has smiled” on the land and on the people of northern Louisiana. Like the boosters in Minnesota, newspapers in Louisiana often touted with superlatives the incredible productivity of the cutover. Two newspapers in Louisiana even “borrowed” from each other in pointing to the potential of the soil, as when *The Caldwell Watchman* in Caldwell Parish wrote that “the largest yield of corn per acre was grown on the cut-over lands of Washington Parish, and it is noted ... that a net profit of \$700 was realized from one acre planted in strawberries on the same kind of soil. Caldwell has thousands of acres of just such land, which can be made to yield handsome profits for any man, who has the energy and will to go after it.” Ten months later, *The Colfax Chronicle* of Grant Parish, reprinted the same short story and changed only the name of the parish that had “thousands of acres of just such land.”⁸⁴

In the same way that local newspapers served as important organs for spreading the ideology of farming on the cutover, they also necessarily recorded the continuing abandonment of older sites of production as firms converted into, or began operating, subsidiary land companies. Additionally, newspapers served as a crucial medium for advertising available lands. In 1916, the *Madison Journal*, for example recorded the closing of the Whitecastle Lumber Company’s sawmill. They reported, “The mill has been in operation about thirty years, and gave employment to three or four hundred men. The plane and factory will run probably one or two years longer. George Gleason ... is left to dispose of the company’s valuable cut-over lands. He will sell it in tracts to

⁸³ Letter to the editor, “Wonderful Possibilities for Grant Parish,” *The Colfax Chronicle*, April 26, 1913.

⁸⁴ *The Caldwell Watchmen*, February 10, 1911; and *The Colfax Chronicle*, December 9, 1911.

farmers.”⁸⁵ In 1920, Industrial Lumber Company, which operated mills in Elizabeth and Oakdale, Louisiana, announced it would begin selling its land to farmers. As the *Rice Belt Journal* reported, “The plan of operation which the company has prepared is as follows: they will be sold in blocks of 80 acres on long time payments.” The company also sought farmers from outside their region, with “the company is bringing its colonization scheme before the northern people who might become interested and is arguing that the mild climate of the south, plentiful rainfall and nearly all year-round growing season should prove an irresistible appeal to the small land owner and tenant farmer of the North.”⁸⁶

Advertisements in local papers also catered to cutover development. The Cutover Land Department of the Great Southern Lumber Company in Bogalusa took out frequent ads in the *Bogalusa Enterprise*, telling readers, “Become Independent – Own Your Own Farm. There will never be another land crop, and you will never have a better opportunity to own your own farm than now.” One day in April 1915, Bogalusa Mill & Supply Company advertised on the same page one of its own important wares: dynamite, “Any amount at the right price.”⁸⁷ The juxtaposition of the two ads pointed out to the knowing reader that, as in Minnesota, bringing land under cultivation in the Louisiana cutover would be hard and potentially expensive work.

Though individual lumber companies, like Great Southern, Long-Bell, Whitecastle, and Industrial worked to direct settlers to their cutover lands, the Southern Pine Association collectively sought to sell settlers farms. *The Southern Lumberman*, the trade association journal of the Southern Pine Association (SPA), urged a “concerted

⁸⁵ *Madison Journal*, March 25, 1916.

⁸⁶ “Start Colonizing at Elizabeth, La.,” *Rice Belt Journal* (Welsh, La.), September 18, 1920.

⁸⁷ *Bogalusa Enterprise*, April 29, 1915.

effort forward inducing immigration to the South” on cutover lands.⁸⁸ In 1916, the SPA echoed Minnesota boosters by advertising cutover lands to men with “small capital.” It wrote:

Louisiana cut-over lands offer the greatest opportunity of the present day as the place to start with small capital and make comfortable homes and profitable farms. These lands are cheap and productive when cleared. ... [H]ere on these upland acres of Louisiana is elbow room and success awaiting the increasing army of land-hungry people of America as well as the probable thousands from Europe who will undoubtedly migrate from that war-ruined continent to America at the close of the strife.⁸⁹

The article included photographs of crops, cattle, sheep, and farm buildings on the cutover. The same year, J.H. Kirby, owner of the Kirby Lumber Company, one of the largest lumber firms in eastern Texas, told the *Beaumont Enterprise* that the colonization of 25 million acres of cutover land between Alabama and Texas was feasible. The paper reported, “a few years ago there was doubt as to whether these lands would prove productive. Tests in Texas as well as in other states have proven it most productive.”⁹⁰ During 1918 and 1919, a monthly *Cut-Over Lands* magazine was even published from St. Louis by a former editor of the *St. Louis Lumberman* and *The Age of Steel* (both industry trade journals). The journal foretold the possibilities for agriculture and grazing on cutover lands across the country, and featured advertisements for lands.

In April 1917, the Southern Pine Association, the Association of Commerce of New Orleans, and the Southern Settlement and Development Organization sponsored and held a three-day “Cutover Land Conference of the South” in New Orleans. These organizations dedicated the conference to “the purpose of discussing the question of best

⁸⁸ R.L. Bennett, “Settlement of Cut-Over Lands,” *The Southern Lumberman*, July 30, 1910, 37.

⁸⁹ E.O. Wild, “The Cut-Over Empire of Louisiana: Cheapest Productive Lands in America,” *The Southern Lumberman*, December 16, 1916, 137.

⁹⁰ *Beaumont Enterprise*, reprinted in *The Colfax Chronicle*, December 2, 1916.

present and future beneficial use for stock raising, agriculture and reforestation to which there might be placed millions of acres now lying idle throughout a large part of the South.”⁹¹ Speakers addressed a number of aspects of cutover development with presentation titles from “Importance of Agricultural Development to the Cities,” “What Georgia is Doing to Encourage the Utilizing of Cut-Over Lands,” and “Stumps and their Practical Removal,” to “Soil Improvement Crops,” “Beef Cattle and Hogs,” and “Tick Eradication.” Given the material interest of lumber firms to dispose of these lands, as well as the ideology of agricultural boosterism flooding the region during the 1910s, it is unsurprising that the majority of speakers endorsed a vision of the cutover predicated on agricultural development.

Despite this consensus on the centrality of agriculture and stock-raising as the main desires for the cutover, there were a few dissenters delivering addresses. Unable to attend the meeting in person, Chief Forester Henry Graves prepared a devastating paper, delivered by another forester, on the topic of “practical reforestation.” After pointing out that southern states were rapidly clearing their remaining old growth stands, Graves turned to the Lake States, describing the rapid fall in production coming from the region. “What is replacing these industries?” Graves asked.

In some places agriculture, but over many of millions of acres nothing – a vast wilderness, fire swept and barren of useful products, here and there a trace of a former sawmill town, old farms deserted because the local industry with its markets is gone, roads almost impassable because the taxable resources that would keep them up has been destroyed, a virtual depopulation of hundreds of

⁹¹ “*The Dawn of a New Constructive Era: Being the Full and Complete Report of the Cutover Land Conference of the South* (New Orleans: 1917), n.p. The Southern Pine Association also published books and pamphlets on the potential agricultural and grazing potential of the cutover. See, for example, Charles Dillon, *Cattle on the Cut-Over Lands: An Independent Investigation of the Livestock and Forage Possibilities of the Gulf States* (New Orleans: Southern Pine Association, 1919).

square miles.⁹²

Not letting the connection between the Lake States and the region under discussion get lost on the audience, Graves continued:

What is happening now in the South? Are the logged off lands being settled up, and is lumbering being replaced by agriculture? In general the extension of agriculture over logged off pine lands is exceedingly slow. It is doubtful whether at the present time the movement much more than offsets the abandonment of cleared lands. We know, for example, that between 1900 and 1910 there was an actual decrease in improved lands in over 25 percent of the counties of the pine region.⁹³

Arguing, “Personally I do not have much expectation that many private owners in the South will individually undertake forestry. ... Nor do I believe that they will succeed in colonizing their cutover lands on any large scale under plans now in vogue,” Graves’ critique of the lumbermen’s vision of an agricultural landscape then turned to the question of what should exist on the cutover.⁹⁴ He suggested that public ownership of the cutover, administered by the Forest Service, would allow the agency to sell any land where agriculture would be feasible to settlers, reforest much other land and sell timber on a sustainable basis. Additionally, some grazing by settlers on public forestland would be allowed. Since he acknowledged that public ownership “may not be feasible,” he alternatively called for public and private cooperation and regulation of land use. Presciently, he concluded, “The public interests in the right handling of these lands is so great, the public loss from wrong handling so far reaching, that it is only a question of time before the states themselves will enact regulatory and restrictive legislation regarding them if they are allowed to become an unproductive waste.”⁹⁵ Graves’

⁹² Henry Graves, “Practical Reforestation,” in *“The Dawn of a New Constructive Era,”* 17.

⁹³ *Ibid.*, 18.

⁹⁴ *Ibid.*, 21.

⁹⁵ *Ibid.*, 22.

progressive vision for the cutover was ahead of its time. Nothing approaching it would happen in Louisiana until the “rural problem” received attention in the Great Depression.

VI. Cracks in Vision of the Cutover in Louisiana

Despite the lofty rhetoric and hopes for cutover colonization in Louisiana as a private market solution for the economic and environmental problems associated with the deindustrialization of the lumber industry, like in Minnesota, the reality of unsold land and poor small farmers belied both the grand vision of the boosters’ and lumber firms’ pragmatic desire to sell land. The Long-Bell Lumber Company, for example, set up a subsidiary firm, the Long-Bell Land Corporation, to sell its cutover acreage to farmers in 1916. By 1930, the subsidiary had sold about 165,000 acres out of a total of 400,000 acres owned by the firm, but about one half of the land had to be repossessed for nonpayment by settlers unable to scratch a living from the soil. Meanwhile, the company returned a further 25 percent of its holdings to the state rather than pay the accumulating taxes on essentially worthless land. On some of its remaining land the firm did attempt some reforestation during the 1920s, though as the Great Depression set in, it abandoned its active reforestation efforts and moved its only forester to Long-Bell’s new plant in Washington state. When the LWP writer commented on Longville’s bright future, they did not know they were looking at an abandoned reforestation project.⁹⁶

Land in the lumbering regions that firms like Long-Bell were able to sell to farmers did not result in large prosperous farms as boosters hoped. U.S. Census data shows that in parishes like Caldwell, Rapides, Vernon, and Washington, total farmland

⁹⁶ Helen King, “The Economic History of the Long-Bell Lumber Company” (M.A. thesis, Louisiana State University, 1936), 12-23.

acres either declined or remained relatively stagnant over the first three decades of the twentieth century, and the percentage of farmland that had been “improved” lagged behind the state average (see *table 5.8*). In Vernon Parish, home to the Louisiana Long Leaf Lumber Company (discussed in Chapter 4), the percentage of improved farmland never exceeded 30 percent, even though in Louisiana as a whole, the percentage of improved farmland increased to 56 percent by 1930. Though not as dramatic a difference as seen in Minnesota – where the state’s average percentage of improved farmland exceeded 70 percent during the same period – the below average rate of improved farmland suggests both a low level of return for farmers on crops and limited capital availability for clearing and seeding additional acreage. Playing off this difficulty, one newspaper even jokingly argued, “The way to utilize cut-over lands without owning or paying taxes on them is to get a bunch of angora goats and turn them loose on it. They are dog proof, disease proof, and their fleece is worth fifty cents a pound.” Even the goats, however, would require a substantial capital investment.⁹⁷

Table 5.8: Improved and Unimproved Farmland, selected Louisiana parishes, 1900-1930										
	Caldwell		Rapides		Vernon		Washington		All La.	
	<i>Farmland</i>		<i>Farmland</i>		<i>Farmland</i>		<i>Farmland</i>		<i>Farmland</i>	
	<i>total acres</i>	<i>% improv ed</i>	<i>total acres</i>	<i>% improve d</i>	<i>total acres</i>	<i>% improve d</i>	<i>total acres</i>	<i>% improve d</i>	<i>total acres</i>	<i>% improv ed</i>
1900	136,099	31.0	285,369	41.2	130,871	20.0	224,540	21.7	11,059,127	42.2
1910	124,016	29.9	251,635	43.2	109,545	23.8	150,339	35.2	10,439,481	50.5
1920	90,711	36.4	219,284	51.7	95,087	29.5	178,794	35.0	10,019,822	56.2
1930	74,490	38.4*	234,584	42.9*	98,404	34.7*	162,955	42.9*	9,355,437	50.7*
*The U.S. Census stopped dividing farmland between “improved” and “unimproved” farmland in the 1930 census. The 1930 number here shows the “percentage of farms in crops.” Source: U.S. Census Bureau. Improved/Unimproved Farmland, 1900-1920; Farmland By Type, 1930. Prepared by SocialExplorer.com.										

More than just a low percentage of improved farmland in Louisiana parishes demonstrated the failure of cutover boosters’ vision; the percentage of parish land that

⁹⁷ *The True Democrat* (Bayou Sara, La.), April 13, 1912.

even became classified as unimproved farmland was also quite low. The snapshot provided by the Louisiana Tax Commission in 1932 showed that in Vernon Parish, for example, there were 710,936 cutover acres compared with only 32,307 acres of agricultural lands. All of these agricultural lands, meanwhile, were classified with the state's lowest grade, a "C."⁹⁸ In Washington Parish, where the *Bogalusa Enterprise* declared in 1915, "Cut over land is just coming into its own and those who have and those who will buy this cut over land before the prices are advanced, will get the greatest value that can be found anywhere in the United States," the situation was almost as bad.⁹⁹ Of the parish's 410,000 acres, 211,363 acres were classified as cutover lands, while the Louisiana Tax Commission classified just 57,188 as agricultural lands in 1932. Of those agricultural acres, almost 50 percent were given the grade of "C" by the commission.¹⁰⁰

Still, like the Minnesota cutover, the efforts of lumber companies and agricultural boosters to encourage immigration was successful at some level. Especially between 1900 and 1920, when the lumber industry was also growing, the population of northern and western Louisiana parishes also grew (see *table 5.9*). Vernon Parish's population, for example, doubled between these years, while Washington Parish's population increased by almost 150 percent. While most of this population increase was due to the development of the lumber industry, the number of farms (and farm families) rose

⁹⁸ V.H. Sonderegger, *Classification and Uses of Agricultural and Forest Lands in the State of Louisiana and the Parishes*, 81. The Census and the Louisiana Tax Commission used different criteria for establishing what "farmland" constituted. The census seems to have included all acreage owned by farmers regardless of whether it was cleared or sat as denuded and stump-riddled cutover land. The Tax Commission, by contrast, seems to have only counted plowed acreage as agricultural land. The 1930 census for Vernon Parish, for example, showed 98,404 acres of farmland, with 34.7 percent in crops (34,146 acres). The 1932 Tax Commission showed 32,307 acres of agricultural lands. Though both show roughly the same amount of actual land being worked, the census data has the additional advantage of showing how much land farmers owned but were unable or unwilling to bring into production.

⁹⁹ Rare Opportunities for Modern Farmers: Days of Experiments Have Passed With Cut Over Land," *Bogalusa Enterprise*, October 21, 1915.

¹⁰⁰ V.H. Sonderegger, *Classification and Uses of Agricultural and Forest Lands in the State of Louisiana and the Parishes*, 82.

modestly in cutover parishes (see *table 5.10*). In Caldwell Parish, the number of farms jumped from 513 in 1890 to 1,236 by 1930. Washington Parish had 1,031 farms in 1890, but by 1930 they counted 2,529. Since the number of total farmland acres declined in both parishes over much of this period as the number of farms increased, it also seems likely that many new farms were created from dividing existing pieces of property, rather than through the purchase of new cutover acreage.

Table 5.9: Population of selected Louisiana parishes, 1900-1940					
	Caldwell	Rapides	Vernon	Washington	All La.
1900	6,917	39,578	10,327	9,628	1,381,625
1910	8,593	44,545	17,384	18,886	1,656,388
1920	9,514	59,444	20,493	24,164	1,798,509
1930	10,430	65,455	20,047	29,904	2,101,593
1940	12,046	73,370	19,142	34,443	2,363,880

Source: U.S. Census Bureau. Total Population, 1900-1930. Prepared by SocialExplorer.com.

Table 5.10: Farms and farm families, selected Louisiana parishes, 1890-1940										
	Calcasieu		Caldwell		Rapides		Vernon		Washington	
	Farms	Farm families	Farms	Farm families	Farms	Farm families	Farms	Farm families	Farms	Farm families
1890	1,609	1,875	513	549	2,582	2,572	841	954	1,031	1,095
1900	2,594	2,562	1,070	1,096	4,249	4,114	1,057	1,088	1,442	1,426
1910	3,199	3,240	956	993	2,874	2,852	1,265	1,304	1,715	1,692
1920	922*	---	1,114	---	3,368	---	1,277	---	2,165	---
1930	1,565	1,694	1,236	1,279	4,305	4,617	1,850	1,920	2,592	2,618

*In 1912, Calcasieu Parish was split apart, creating Beauregard, Jefferson Davis, and Allan parishes, which explains the apparent drastic population decline in the census data.

Source: U.S. Census Bureau. Farms. Farm families, 1890-1940. Prepared by SocialExplorer.com.

A 1936 research report sponsored by the Federal Emergency Relief Administration, the Federal Emergency Relief Administration of Louisiana, and the Louisiana Agricultural Experiment Stations investigated the living conditions and population characteristics of cutover residents. Like northern Minnesota, western and northern Louisiana fell in one of the six rural “problem” regions where high unemployment, rates of relief, and poverty made New Dealers question whether “land

retirement” and population “resettlement” would be beneficial policies. The report, which focused on a section of La Salle Parish (in the northeastern part of the state) where “the [lumber] mills are just now cutting out,” showed the difficult conditions facing not only rural families eking out a living on the cutover, but the trouble facing residents in soon to be closed mill towns.¹⁰¹ The study found, for example, “589 of the 862 families in the Ward, or 68 percent of the cases, resided in either sawmill villages or in the lumber camps.” Of the families living in the villages, the investigators found that 74 percent of white heads of households and 76 percent of black heads of household received direct employment from the lumber industry. Another 10 percent of household heads were unemployed lumber workers. Though the researchers found some emigration taking place, they argued that the decline of industry would push more people onto the cutover as farmers, a prospect they did not relish. Speaking of the “families living in the open country (farms and woodland clearings),” they speculated, “In all probability, their mode of life also furnishes us with a prototype of that to which the entire population will be forced as soon as the mills cut out. Indeed, unless new enterprises are developed, the picture will be even darker when the lumber industry, which now makes considerable contributions to the living of the people residing in the open country, will not be there to supplement returns from agriculture.”¹⁰² In other words, not only did the lumber industry’s cutover land make poor farms, but with the decline of the industry a major source of cash income for farmers trying to work this land would also dry up, thus exacerbating an already difficult situation for many.

¹⁰¹ T. Lynn Smith and Martha Ray Fry, “The Population of a Selected ‘Cut-Over’ Area in Louisiana,” Louisiana State University, Louisiana Bulletin no. 268: 4.

¹⁰² Ibid., 33.

The prospect of former lumber workers pouring onto the land in an attempt to become subsistence or small market farmers frightened these researchers, in part, because of what they found when they visited farms in the region. As shown above the percentage of “farmland” in crops was low, but in absolute size the researchers found “less than 30 per cent of the farms contained as many as 50 acres; only about one-fourth of the farm operators actually cultivated as many as 20 acres of land; and more than one-half of the farms less than five acres of the chief cash crop, cotton, were planted.”¹⁰³ The result of these small plots was that of the 210 white families living on farms in the ward, 134 (over 60 percent) earned a total of under \$200 per year.¹⁰⁴ One hundred and one of these families were either on government relief at the time researchers interviewed them or had been on relief within the previous two years. Over 55 percent of the land area in this ward, meanwhile, was tax delinquent.¹⁰⁵ Similar to the situation in Minnesota, evidence from Louisiana suggests that though people did move onto the cutover, they were poor, and much of the cutover acreage continued to lay fallow or was abandoned.

Though the agricultural colonization of the cutover remained a powerful ideology in Louisiana into the 1920s, the problems inherent in cutover development, discovered by researchers in the 1930s, was observed in the state much earlier. Perhaps unsurprisingly, an important, if short lived, critique of cutover land sales and agricultural development came during 1913 and 1914 from the Brotherhood of Timber Workers’ newspapers, *The Lumberjack* and *The Voice of the People*. In brief references to the cutover these papers

¹⁰³ Smith and Fry, “The Population of a Selected ‘Cut-Over’ Area in Louisiana,” 37.

¹⁰⁴ Ibid., 35. Only 11 African-American families were engaged in farming in this ward of La Salle county, a fact explained (with much understatement) by researchers thusly: “Conversations with the white farmers in the area studied revealed that they were strongly opposed to Negroes settling on the land in this territory, which no doubt accounts for the present scarcity. Only in a few cases, where fairly well-to-do families desired domestic servants, were Negroes welcomed in the open country.” Ibid., 7.

¹⁰⁵ Ibid., 39-40.

made clear that they understood the poor quality of much of the land being sold to farmers (and its high price), while also showing a resentment toward the ability of lumber firms to control vast forest acreage in the first place. In an article describing the use of “thugs” by lumber barons to intimidate workers, *The Lumberjack* sarcastically wrote, “Come to Louisiana, you farmers and workingmen they are trying to bunco into buying cut-over and marsh lands at forty times their real value, and get a taste of its government of the people by overseers and thugs for the Blind Tigerbund.”¹⁰⁶ Another well-placed, darkly humorous joke about the supposed value of cutover lands came almost one year later, in January 1914, as *The Voice of the People* (*The Lumberjack*’s successor) sought to shine a light on an unfair trial of a worker in Texas. Calling on the radical press to expose the state’s anti-labor politics and kangaroo courts, the *Voice* hoped good press coverage of the state would reach far and wide, making “every real estate shark ... go broke for lack of suckers to colonize and re-colonize on cut-over swamps and desert dust” as workers decided against moving to the state.¹⁰⁷

These references to the cutover imply that forest workers were skeptical about the quality of land being pushed by cutover boosters. At the same time, however, in April 1913, *The Lumberjack* published an article titled, “Forest Swiping,” which suggested that the real problem with the cutover lay not in the quality of the land, but with its owners and its procurement. Referring to a tract of land owned by the Pickering Land and Timber Company and the Long-Bell Lumber Company, *The Lumberjack* argued, “So rotten is the title” to lands supposedly bought by the firms from the federal government “that none of the Companies that hold it can give title to it, tho [*sic*] they are asking from \$10 to \$20 an

¹⁰⁶ “Pitkin Thugs Assault Havens and Edwards,” *The Lumberjack*, January 30, 1913.

¹⁰⁷ “Under the Black Flag of Texas,” *The Voice of the People*, January 15, 1914.

acre and more for their cutover lands.” Such speculation on land with questionable origin, they continued, “is what they call ‘developing the resources of the South’ by the ‘Christian men to whom God in his infinite wisdom confided the business interests of this country.’” Though they would not have used the same language as *The Lumberjack*, the Bureau of Corporations’ report issued in 1913 on the lumber industry also raised questions about land titles and fraud. *The Lumberjack* continued by arguing that these lands could be put to better use in the hands of workers and farmers instead of through the speculative sales lumber companies were engaged, writing “In the meantime the lands are being withheld from the farmers and the lumberjacks are starving on the job, which, however, many of the lumberjacks seem to like, but it sure is tuf on the women and children [*sic*].”¹⁰⁸ Sociologist Geoffrey Ferrell has argued that the Brotherhood of Timber Workers’ analysis of lumber firms’ cutover policies is part of what made local farmers their allies, as their poverty made it difficult for them to buy land from the timber companies.¹⁰⁹

Though lumber workers certainly did not make a case for reforestation, they did identify problems within the system of cutover development. On the one hand, they evinced skepticism at the quality of the land being sold to cutover migrants, while also making an implicit argument that the land should be opened up for use to local people. In addition to radical lumber workers’ jaundiced understanding of cutover landowners’ motivations, however, during the 1910s some groups did begin to question the feasibility of the boosters’ plans and developed an alternative model of post-lumbering

¹⁰⁸ J.R. Strother, “Forest Swiping,” *The Lumberjack*, April 20, 1913.

¹⁰⁹ Ferrell argued that the cutover land policies of the lumber firms was, in part, what drew local farmers to the BTW during the conflict. Firms were holding their lands as investments thinking the price would rise, etc. See Geoffrey Ferrell, “The Brotherhood of Timber Workers and the Southern Lumber Trust, 1910-1914” (Ph.D. diss., University of Texas, 1982), 525-548.

development: reforestation. At a time when other papers were still thinking about the agricultural potential of the cutover, in 1921, a prescient editorial in the Franklinton (Washington Parish) *Era-Leader* took note of the recently released 1920 census data that showed the low percentage of farmlands in Washington Parish (home of the Great Southern Lumber Company) and neighboring St. Tammany Parish (discussed above).

The editor wrote:

Now what does the above figures signify? [*sic*] Does it mean that the lands in these two parishes cannot be farmed profitably? By no manner of means, Yet at the same time we do not want to fool ourselves by thinking that our forefathers and the people who have gone before us in this country, covering more than a century of time, have fooled themselves in not putting some of this land in cultivation.¹¹⁰

Continuing, the editor argued that all of the land in the region that could grow crops profitably was already under cultivation, and noted that “the land not in cultivation, however speaking with reference to the land owned by the farming class of people, has now practically all been denuded of its trees, and that percent of the land owned by the lumbermen is being rapidly denuded of its trees.” The ecological implications of this situation, the editor accurately grasped, lay in wildfires, erosion, silted streams, and a decline in the habitats for game animals. Reforestation would not only solve these problems, but would put “loafing” – idle – acres to work and provide a foundation for continuous economic success in a way that the colonization scheme did not fulfill. By the end of the 1920s, it was an increasingly popular view. By the 1930s, as the New Deal State maintained the relationship between public and private interests, and public and private power, this view could be stated openly. In 1933, State Forester V.H. Sonderegger put it simply:

¹¹⁰ Editorial, “Loafer Acres Sound Warning,” *Era-Leader* (Franklinton, La.), October 27, 1921.

The problem of cut-over lands is a question of what to develop on idle lands that will make a return on the investment for the landowner. Inasmuch as the State of Louisiana has sufficient agricultural lands, there is but one recourse for the idle and cut-over lands and that is to grow a timber crop, unless there are some other crops that will produce a greater yield.¹¹¹

VII. Conclusion: The Deindustrialization and Reforestation of the Louisiana Cutover

This chapter has focused on the extent to which as lumber companies deindustrialized in both Minnesota and Louisiana they directed the post-lumber economy and ecology through their support of cutover agricultural development. This approach challenges “industrial environmental histories” that end their narratives as the mills cut out and cutover land lay fallow. For studies that do connect the lumber industry to the cutover and forestry, the figure of Henry Hardtner looms large in creating a narrative of redemption and progress in southern forests. Hardtner, the owner of the Urania Lumber Company in Louisiana since the 1890s, was a visionary who understood the potential of reforestation in the state, not just as a government subsidy or pet project, but as a potentially profitable business decision. Hardtner, as the newly-appointed chairman of the forestry committee in the state’s young Conservation Commission, argued successfully in 1910 for the passage of legislation that permitted the creation of the first cooperative reforestation effort, thereafter making Hardtner “inseparably connected with Louisiana forestry,” according the V.H. Sonderegger.¹¹² Under this program, landowners could contract with the state to reforest its land, with the state supervising the project and the landowner agreeing not to cut the trees for a period of up to 40 years. In exchange,

¹¹¹ V.H. Sonderegger, “Classification and Uses of Agricultural and Forest Lands in the State of Louisiana and the Parishes,” Bulletin no. 24, Louisiana Department of Conservation, Jan. 1933: 7.

¹¹² V.H. Sonderegger, “The Progress of Reforestation in Louisiana,” *The Southern Lumberman*, December 22, 1923, 171.

landowners received a very low assessed value of the land for tax purposes (the initial legislation recommended a fixed valuation of \$1 per acre).¹¹³ In 1913, Hardtner himself became the first landowner to enter into a reforestation contract with the state, creating a 25,000-acre reforestation tract. This project attracted the attention of many in forestry, including, among others, Herman H. Chapman, the Yale Forest School professor. The Urania reforestation lands became an important workshop for Yale students (discussed in Chapter 2) and also a research site for many aspects of southern forest reproduction, especially the role of fire in the growth and regrowth of southern pines.¹¹⁴

Despite the demonstrative effect that the Hardtner plan offered, and its long-term and national influence in setting up an alternative to the annual *ad valorem* tax system with the timber severance tax, what is striking about Hardtner's work is the extent to which few other lumber capitalists sought to follow its lead, at least through the early 1920s. No other company, for example, put any land under reforestation contracts with the state until 1922, almost ten years after Hardtner. Even then, the reforestation movement in Louisiana was much more visible in words than deeds. During the 1920s, Louisiana newspapers recorded considerably more support for reforestation than in the previous decade, among both lumber mill owners and editors. Still, despite this publicity, an examination of the list of reforestation contracts between the state and private

¹¹³ Act 261 (1910). In 1922, Act 90 carried over the main provisions of the 1910 law into the new state constitution. In 1926, the Louisiana legislature amended this provision, providing for a 6% severance tax on all timber cut on land under reforestation contracts, giving the state and parishes more income than from the low *ad valorem* taxes earned on the assessed value of the land, which had been kept low by the contracts. On Louisiana forest law, see Louisiana Department of Conservation, "Brief History of Reforestation Legislation in Louisiana and Facts Leading Up To and Regarding the Contracts Entered Into Between the State Conservation Department and the Urania Lumber Company and Hardtner and Tannehill of Urania" (n.d.).

¹¹⁴ On the early years of the forestry laws and institutions in Louisiana, see Burns, *A History of the Louisiana Forestry Commission*; and Ed Kerr, *History of Forestry in Louisiana* (Louisiana Forestry Commission, 1958).

landowners show reforestation to be both a geographically uneven and ultimately minority activity among landowners. At the end of 1941, after almost thirty years of the program in Louisiana, just 609,455 acres of private land were under reforestation in a state containing approximately 10 million cutover acres. Kisatchie National Forest, established in 1930, held roughly the same number of acres. More than 247,000 acres (40.6%) of all of these private reforestation lands were under contract by the Great Southern Lumber Company (purchased in 1938 by the Gaylord Container Corporation) in four parishes in the eastern part of the state. Vernon, Beauregard, and Calcasieu – centers of the lumber industry – had no land under contract.¹¹⁵ Another measure of reforestation shows that between 1925 and 1940, 172,163 acres of land in Louisiana were planted for forests. During that 16-year period, however, 89,830 of those acres (52.2%) were planted between 1934 and 1940 on federal land, mostly by Civilian Conservation Corps workers.¹¹⁶

Attitudes and practices towards “sustained yield” forestry shifted during the 1930s, but for much of the first three decades of the twentieth century, as the lumber industry deindustrialized across northern Minnesota and western and northern Louisiana, the cutover was not conceptualized or shaped by reforestation. Instead, lumber companies and boosters interpreted the cutover as a potentially bountiful ecological space and a social refuge or panacea for the urban poor. This vision rested on both cultural assumptions about economic independence and economic expectations of lumber firms that they could earn money by selling the land. The vision of lumber companies and the

¹¹⁵ Department of Conservation, *Fifteenth Biennial Report: State of Louisiana, 1940-1941* (New Orleans, La.: Department of Conservation, 1942), 76-79.

¹¹⁶ Hamlin L. Wiliston, *A Statistical History of Tree Planting in the South, 1925-1979*, Miscellaneous Report SA-MR-8 (Atlanta, Ga.: U.S Department of Agriculture, Forest Service, 1980), 14.

cutover press, though, foundered on their very assumptions about the environment and American political economy. The point here, though, has been not only to recognize the gap between the wild dreams and self-interested enthusiasm of boosters and land sellers and the harsh reality of working the cutover, or even just to identify the material interest of lumber firms in disposing of this land quickly and by almost any means. Additionally, this chapter explored how lumber-industry-sponsored cutover agricultural development defined the deindustrialization of the lumber industry itself. When capital moved away from the forests and lumber towns it continued to cast a long shadow on the ecology and economy of these regions. During the Great Depression, the state began to understand economy and environment in new ways, undermining the agricultural project in favor of one that rested on reforestation, recreation, and state owned and managed lands. State ownership did not necessarily mean that all lands would be withheld from timber extraction. In the post-war period, state and federal lands became increasingly important to production in the forest products industry.

EPILOGUE

Attention to the great mobility of the lumber industry in the late nineteenth and early twentieth century – the “nomadism” captured in Forester William B. Greeley’s image of a great combine rushing across the country’s forests as through a giant wheat field – misses an equally important piece of its mechanics: the structuring of these production spaces both long before and long after workers removed and processed the valuable portions of the forest environment. Though loggers seemed to move quickly from 40-acre plot to 40-acre plot, and region-to-region, in the process of valuing the forest, establishing logging camps and sawmill towns, and selling cutover farms, firms created sets of working and living environments and regional landscapes that shaped northern Minnesota and Louisiana from the 1870s through the 1930s, and beyond.

As this dissertation has shown, workers performed the labor undergirding the maintenance and expansion of these spaces, but also challenged lumber firms’ power at various moments. First, timber cruising represented the initial structuring of the forest spaces by lumber firms, as they sought to ascertain the value of the forest itself. The “radical simplification” of forests proved challenging, as the “managers’ brains” remained squarely “under the workman’s cap.” Professionalization of this task by forestry school trained foresters offered a way toward more authoritative valuations of the forest. Next, loggers and millworkers faced the forest not as figures of board feet and prices per acre, but through workplaces and homes defined by the needs of lumber firms. Workers sought to undermine these environments through radical union movements at

various moments, attempting to redefine them on a less exploitative footing. Finally, the post-lumber regime owed its landscape to the lumber industry, of course, but the social purpose to which this deindustrialized space was put – smallholder agriculture – remained outlined by the industry through its extensive landownership and by its agricultural boosterism. This vision foundered on its assumptions about nature and society.

Historians who have only followed the “frontier” of lumber production have missed the tension between the industry’s mobility and its long-term influence over the spaces of production. By stretching the spatial and temporal frame we can see how the lumber industry sought to control workers and nature (not without difficulty) in several phases of its development and in different ways and at different scales – through valuing nature, structuring the point of production, and dominating the deindustrialized, post-lumber landscape of Minnesota and Louisiana.

These uneven transformations, however, did not – could not – stop in the 1930s. Instead, the American lumber industry and the forests of Minnesota and Louisiana have been marked by further social and environmental changes. This epilogue briefly sketches some of the shifts undergone in the industry since the 1940s, particularly with respect to land use, the commodification of nature, the labor process, and forest ecology. Perhaps the most significant adjustment in the lumber industry after World War II lay in its less “nomadic” character. “Sustained yield production” – the oft-discussed (if rarely implemented) ideal for foresters and conservationists, where landowners would harvest logs and replant a new crop on the same land – actually began to be implemented on private land, especially in the Pacific Northwest and the South. As an anthropomorphic

squirrel explained to readers in a West Coast Tree Farm publicity pamphlet in 1948, “The *Tree Farm* program is a business proposition. It is a design for permanent forest production. *Tree Farms* must pay their way on the basis of free enterprise in the timber.”¹ In that year, and as the Cold War set in, private owners touted that almost three million acres of land were operating as tree farms in the Douglas fir region of Oregon and Washington alone.² Though private tree farms did represent a shift in the political economy of the industry it is important not to overstate its successes. As a sympathetic commentator noted in 1949, “The challenge remaining to the tree farm movement is clear. The cutting practices on nearly two-thirds of America’s forest land are yet poor to destructive, and 136 million acres of forest still lack any organized protection.”³

Establishing sustained yield production was a process, not an overnight change. Still, several developments slowed the industry’s movement and spurred efforts for sustained yield on private land, especially the post-war mergers and consolidations of lumber firms, declining availability of productive private forestland, and the passage of a law assessing timberlands through the capital gains tax.⁴ This (slow and incomplete) transition to “sustained yield” management altered the industry’s relationship to nature and workers, but it did not end the exploitation of either.

Alongside these material changes in forestland use, the meaning of, and contestation over, “sustained yield” has also changed since its development by progressive foresters during the early twentieth century. At its heart the term suggests an

¹ “West Coast Tree Farms,” West Coast Tree Farms pamphlet, 3, 1948, National Forest Products Association—National Lumber Manufacturers Association papers, Forest History Society (Durham, N.C.).

² Ibid., 26-27.

³ Paul F. Sharp, “The Tree Farm Movement: Its Origins and Development,” *Agricultural History* 23, no. 1 (1949): 45.

⁴ Harold K. Steen, ed., “Capital Gains for Forest Lands: The Origins of the 1944 Tax Legislation,” *Journal of Forest History* 22, no. 3 (1978): 146-148.

interest in “sustainability” over the long run, but everyone does not agree upon *what* precisely should be sustained. Does the monoculture of even-aged, rapidly growing pine trees even constitute a forest? Or do all its organisms and biological processes define a forest ecosystem? Noted historian Samuel P. Hays has observed that depending on your answer to those questions you fall into support of “commodity forestry,” where the forest is valuable primarily for the merchantable timber it contains and will be able to continue to produce, or “ecological forestry,” where the cultivation of “merchantable timber” should be done in ways that prevent the degradation of the broader ecosystems in which timber sits.⁵

Through the 1960s in the U.S., commodity forestry ruled – even progressive foresters like Raphael Zon were concerned primarily with the productive capacity of the forest, risk of fires, and watershed quality, not whole ecosystems. He criticized private lumber companies and their power because they did not put forests to efficient, productive use. Growth in the field of ecology (including through the work of former forester Aldo Leopold), the environmental movement, and increasing recreation in forests during the mid-twentieth century each led to different understandings of the forest which put them at odds with the industry’s understanding of forestry. These views came to a head most famously during the early 1990s in the Northern Spotted Owl controversy in the Pacific Northwest. In that case, federal courts stopped logging on old-growth lands in the Pacific Northwest after the owl was placed on the endangered species list, provoking an angry backlash from lumber firms and workers affected by the halt in logging. Though the controversy illustrated the class politics and tensions in environmentalism, it also can

⁵ Samuel P. Hays, *Wars in the Woods: The Rise of Ecological Forestry* (Pittsburgh: University of Pittsburgh Press, 2007).

tell us about different visions of the forest. These divisions over how to create “sustainable” forests point to the slipperiness of “sustainability” in our broader political discourse, and the extent to which it can be used simultaneously with varied meanings by large corporate interests and environmentalists.

The process of commodifying nature – explored in this dissertation through the labor of timber cruisers during the early twentieth century – also deepened under this sustained yield regime. The smaller, second growth trees that lumber firms harvested during the latter half of the twentieth century required that lumber firms incorporate several recent technologies – especially plywood, glued laminated timber (glulam), and particle board – in order to meet demand for forest products. Essentially, without massive and cheap old growth trees to form into large dimensional lumber, the industry utilized new processes for fashioning smaller lumber in ways that still fulfilled old demands, intensifying their use of the “merchantable” parts of the forest.

In addition to changes in land use and in the type of wood products manufactured, the post-war period saw a deeper shift in the industry’s relationship to the trees themselves. According to geographer W. Scott Prudham, before the development of sustained yield forestry on a wide basis (the period described in this dissertation), “the nature upon which capital relied was truly external or ‘found’ in a material sense.”⁶ The industry did not grow or manage the forests it liquidated. In contrast to farming – the forester’s favorite analogy for sustained yield – loggers removed a “wild” species and consumed it, without planting again or breeding for better individuals. As the ‘found’ nature suitable for logging declined in scope, the industry began “moving from extraction

⁶ W. Scott Prudham, *Knock on Wood: Nature as Commodity in Douglas-Fir Country* (New York: Routledge, 2005), 95.

to cultivation.”⁷ In the Douglas-Fir region of the Pacific Northwest, where Prudham focused his study, efforts to breed and engineer trees to grow bigger and faster (thereby maximizing return on investment) appropriated nature through tree improvement programs (and the imminent introduction of genetically engineered trees). To Prudham, this means that in private forests “nature is increasingly made,” instead of found.⁸ Breeding and engineering new tree varieties, he warns, has its own set of “significant and unpredictable ecological risks,” such as the spread of engineered genes into non-modified tree populations, or even to other plant species.⁹

These post-war shifts in land use and commodification coincided with changes in the technology and labor processes of logging and milling, and the fortunes of the labor movement. Though mechanization had been occurring for much of the period under study in this dissertation, improvements in the internal combustion engine and related technologies profoundly changed the industry, supplanting water, steam, animal, and human power in many phases of the production process. Gas-powered and (relatively) light chainsaws replaced the cross-cut saw, speeding the process of felling and cutting trunks into logs. Diesel skidders and donkeys moved logs to collection points quickly, substituting for horses and steam skidders, while flatbed trucks, logging roads, and enlarged highways enabled cheap transportation to mills without the aid of railroads or rivers. This system, of course, depended on the availability of cheap fossil fuels.¹⁰

These changes mechanized the industry, reducing the number of workers required at the very time that per capita consumption continued its decline. In 1950, the lumber

⁷ Prudham, *Knock on Wood*, 96.

⁸ Ibid., 113.

⁹ Ibid., 115, 136-137.

¹⁰ Ken Drushka and Hannu Kontinen, *Tracks in the Forest: The Evolution of Logging Machinery* (Helsinki: Timberjack Group, 1997).

and wood products industry employed 837,000 workers (in logging operations, sawmills, and pulp and paper production), but by 1982 (in the midst of a recession) that number had fallen to 603,000 workers.¹¹ Today, approximately 370,000 people work in the industry.¹² Though the idea of sustained yield promised to keep production from moving across the country as it did during the late nineteenth and early twentieth centuries, advances in the production process did not guarantee stable employment. The deindustrialization that earlier affected Minnesota and Louisiana as a result of the decline in merchantable timber came to major lumber producing centers again in the late 1970s and early 1980s as part of the broader trend of internationalizing production and increasing labor productivity. Employment in Oregon's lumber industry tumbled from over 80,000 in the late 1970s, to fewer than 50,000 by 2000. In addition to long term trends in the industry, lumber production remains very susceptible to recessions, as any slowdown in the construction (where wood is a primary building material) results in reduced demand. One former mill worker in Coos Bay, Oregon told historian William Robbins in the early 1980s why she did not want to return to work in the industry even if employment improved at the end of the recession: "I did not want to be back into woods products, because I did not want to be right back in the same vicious cycle again."¹³

The labor movement in the forest products industry – frustrated at various moments by lumber firms in Minnesota and Louisiana during Industrial Workers of the World-affiliated organizing drives – achieved more success beginning in the 1930s under

¹¹ Mary Beth W. Scaggs, "Recent Employment Trends in the Lumber and Wood Products Industry," *Monthly Labor Review*, August 1983, 20-24.

¹² The data series has changed since the earlier years. Both collected by the Bureau of Labor Statistics, but 1950 and 1982 data are from SIC-24, while 2012 data is from NAICS 113 and 321.

¹³ William G. Robbins, *Hard Times in Paradise: Coos Bay, Oregon, 1850-1986* (Seattle: University of Washington Press, 1986), 11.

the International Woodworkers of America (IWA), a CIO-affiliated and Communist-led union. Especially on the West Coast, they succeeded in organizing large parts of the industry.¹⁴ The decline in lumber employment and employer anti-unionism has curtailed the union's power, however, and in the 1990s, with membership around 20,000, it merged with the International Association of Machinists.

Substantial portions of the logging industry, meanwhile, remained non-union throughout the post-war period as many large lumber mills ran their logging operations through subcontractors. Logging contractors had been an important part of logging in the Great Lakes states, but may have been less common during the capital-intensive railroad logging in the South and Pacific Northwest during the first part of the twentieth century. With truck logging, the practice again flourished, especially under the ideology of “flexible production” associated with neoliberalism. The use of contractors, or so-called gypso crews, in logging allows lumber firms to avoid insurance costs (high because of logging's danger) as well as escape the pressure to keep expensive capital and labor employed when demand for wood is slack. Instead, they can simply refuse to offer as many logging contracts for the next season. Geographer W. Scott Prudham estimates that logging crews employed directly by lumber companies account for no more than ten or fifteen percent of all logging in Oregon.¹⁵ This process is not unique to that state, however, and was evident during the unsuccessful efforts of the Maine Woodsmen's Association to organize a union among logging contractors in the Maine pulp and paper

¹⁴ Jerry Lembcke and William M. Tattam, *One Union in Wood: A Political History of the International Woodworkers of the America* (New York: International Publishers, 1984). On the growth of the paper workers' union, see Robert H. Zieger, *Rebuilding the Pulp and Paper Workers' Union, 1933-1941* (Knoxville: University of Tennessee Press, 1984).

¹⁵ Prudham, *Knock on Wood*, 25-31.

industry in the mid-1970s, an episode vividly captured by the documentary, *Cut and Run* (1980).

More recently, the pressures faced by contract logging operations and the danger of their working environments have formed part of the drama in two reality-television series on logging, *Ax Men* (History Channel) and *American Loggers* (Discovery Channel). These shows' success turns on the danger of logging (after fishing the deadliest occupation in the U.S. during 2011), which is partly a result of the business's need to quickly and cheaply cut and extract logs in order meet financial obligations on equipment and wages. These shows, just part of a reality television genre featuring workers in dangerous, "dirty" jobs, highlight the skill and risks faced by (mostly white male) workers in the industry. They fail, however, to explain (or even mention) how those working environments fit into the political economy of paper and lumber manufacturing, a vertically disintegrated system that allows mills to push risk onto small logging businesses and workers.

If the fate of the industry has been in intensifying the commodification of nature, sustained yield production, declining employment and risky working environments for those retaining jobs, what has been the fate of the forests in northern Minnesota and Louisiana? Did these regions "recover" from the lumber industry? Perhaps unsurprisingly, the cutover lands of Minnesota and Louisiana did regrow during the twentieth century. The composition of the forest changed considerably from the one encountered by logging crews in the 1880s, however. Prior to the lumber industry's presence in both states, periodic fires were the most important forces of change in the forest, with these burns often favoring the regrowth of pines. In Minnesota, according to

ecologists Steven K. Friedman and Peter B. Reich, “substituting logging for fire as the predominant form of disturbance shifts competitive advantage to broad-leaved shade intolerant deciduous species.”¹⁶ In addition to the biological pressures favoring deciduous species, other research emphasizes the role of human management objectives (tree planting) that encouraged the growth of aspen (useful for pulp and paper manufacture) at the expense of white pine and other conifers.¹⁷

The changes during the regrowth of southern forests have been even more dramatic. Longleaf pine (*pinus palustris*), which dominated the critical lumbering regions of northern and western Louisiana was logged so completely that there are no known old-growth stands of the tree in the state. Because fire served such an important role in keeping the species dominant – it may have covered over 60 percent or approximately 81 million acres of the landscape in the southern coastal forests before European settlement – the fire suppression put into place by foresters during the 1910s and 1920s means that (as in the Lake States) hardwood and other pine species regrew on unmanaged lands.¹⁸ Today, less than 2 million acres of longleaf pinelands exist in the southeast. Tree farms, meanwhile, have favored the planting of slash and loblolly pine because these species grow more rapidly. The decline in longleaf pine has imperiled a variety of animals and other plant species, most famously the red-cockaded woodpecker (*picoides borealis*),

¹⁶ Steven K. Friedman and Peter B. Reich, “Regional Legacies of Logging: Departure From Presettlement Forest Conditions in Northern Minnesota,” *Ecological Applications* 15, no. 2 (2005): 742.

¹⁷ Michelle M Steen-Adams, Nancy Langston, and David J. Mladenoff, “White Pine in the Northern Forests: An Ecological and Management History of White Pine on the Bad River Reservation of Wisconsin,” *Environmental History* 12, no. 3 (2007): 595-629. See also Lee E. Frelich and Peter B. Reich, “Old Growth in the Great Lakes Region,” in *Eastern Old-Growth Forests: Prospects for Rediscovery and Recovery*, ed. Mary Byrd Davis (Washington, D.C.: Island Press, 1996), 144-160. The spread of White Pine Blister Rust also hurt the regrowth of white pine in the Lake States during the second half of the twentieth century.

¹⁸ D. Bruce Means, “Longleaf Pine Forest, Going, Going, ...,” in *Eastern Old-Growth Forests*, 210-229.

which makes its nests in the trunks of longleaf pine trees. The bird is classified as endangered.

These post-logging forests are hardly static, however. Using computer modeling, the U.S. Forest Service estimates that as climate change accelerates during this century, aspen, birch, spruce, fir, and pine species now dominating northern Minnesota forests will “retreat” north and the forests of the state will be dominated by deciduous species associated during the twentieth century with more southerly climes. Louisiana forests face much the same pressures as in northern Minnesota, with the effect of forests “retreating” northwards in the state, further threatening longleaf pines.¹⁹ In addition to climate change, scientists have also charted the ways that acute ozone and sulfur dioxide emissions have affected white pine (especially susceptible) and other tree species across the county, causing diebacks.²⁰ Industrial society collectively, not just the actions of one sector, is having an enormous impact on our forests.

If the possibility for slowing climate change and reducing other environmental problems seems daunting, little in this dissertation provides encouragement. Lumber firms during the late nineteenth and early twentieth centuries structured space at local and regional levels, marshaled land and workers for their own ends, and maintained hegemony over federal and state forest policy for most of the period under study. Still, the industry’s power was not immutable or divinely inspired, but rather dependent on a set of specific historical and geographical circumstances. Furthermore, some Americans

¹⁹ A.M. Prasad et. al., “A Climate Change Atlas for 134 Forest Tree Species of the Eastern United States,” Database (<http://www.nrs.fs.fed.us/atlas/tree>), Northern Research Station, USDA Forest Service, Delaware, Ohio, 2007-ongoing.

²⁰ David M. Richardson, et. al., “Human Impacts in Pine Forests: Past, Present, and Future,” *Annual Review of Ecology, Evolution, and Systematics* 38 (2007): 275-297; and C.L. Rezabek, et. al., “Regional Effects of Sulfur Dioxide and Ozone on Eastern White Pine (*Pinus Strobus*) in Eastern Wisconsin,” *Plant Disease* 73, no. 1 (1989): 70-73.

rejected the industry's right to the forest and imagined alternatives. Bob Marshall, a thirty-two year old forester, was one of these dreamers, publishing *The People's Forests* in 1933. This short book fought the conventional wisdom of the day. The first step in reconceptualizing the forest, Marshall recognized, lay in "shun[ning] conservatism's facile defense of damning any fundamental changes with a glib use of the terms 'unrealistic,' 'impractical,' and 'utopian.'"²¹ On that footing, *The People's Forests* recounted the destruction that the lumber industry had wrought since the 1870s and then made the case for the socialization of the nation's forests. Marshall argued "the time has come when we must discard the unsocial view that our woods are the lumbermen's and substitute the broader ideal that every acre of woodland is rightly a part of the people's forests."²²

While Marshall's specific plans for forest socialization may have lost some of its immediacy in the almost eighty years since its publication, his criteria for evaluating public policy remains prescient, if still too often a dream. Marshall wrote: "In planning the management of our forests we should consider the effects of our policy on the following elements in the social scheme: 1. The forest. 2. The land. 3. The worker. 4. The consumer. 5. The community."²³ Especially notable for their absence on Marshall's list were "the capitalist" and "profits." We would do well to write more lists like Marshall's when we imagine new policies for our forests, our cities, and our planet.

²¹ Robert Marshall, *The People's Forests* (1933; repr., Iowa City: University of Iowa Press, 2002), 79.

²² *Ibid.*, 219.

²³ *Ibid.*, 80.

BIBLIOGRAPHY

Primary Sources

Archival Material:

Beltrami County History Center (Minnesota)

Reid, James. Interview. Transcript. July 25, 1973.

Forest History Society, Durham, N.C.

Eitel, George Frederick. Interview by Elwood R. Maunder. Transcript. n.d.

National Forest Products Association-National Lumber Manufacturers
Association papers

Society of American Foresters records

Sutton, Lyman. Interview by John Larson. Transcript. 1954.

Yale Forestry Club "Experience Book," 1910-1913, records (#7135)

LOUISiana Digital Library <louisdl.louislibraries.org>

Louisiana Works Progress Administration Collection

Louisiana Federal Writers' Project notes

Louisiana State Archives, Baton Rouge, Louisiana

Louisiana Long Leaf Lumber Company records

Louisiana State University, Hill Memorial Library, Baton Rouge, Louisiana

Louisiana and Lower Mississippi Valley Collection

Charles L. Wright papers (Mss. 4785)

Minnesota Historical Society, St. Paul, Minnesota

Administrative files, misc. Conservation Department, Forestry Division

Atwood Lumber Company papers (P906)

Lyman Ayers Diary (M593)

James H. Bell papers (A/-B433jh)

Chippewa River Improvement and Log Driving Company Papers (P457)

Frank H. Gillmor papers (P2334)

Andrew Glenn and family papers (A/.G558)

Immigration Land Company records (P940)

Laird, Norton Company records (ALPHA)

Minnesota Forestry Association papers (P2549)

Northern Pine Manufacturers Association papers (P1057)

Old Colony Land Company Papers (P1798)

Raphael Zon Papers (P1237)

Oral Histories:

Ahlgren, Clifford. Interview by Newell Searle. Transcript. May 11, 1976.

Brown, Marion. Interview by John Esse. Transcript. October 29, 1975.

Carno, Alexander. Interview by John Esse. Transcript. August, 4, 1976.
 Costley, Leonard. Interview by Bruce C. Harding. Transcript. August 3, 1957. Interviews with Pioneer Lumbermen (P2385).
 Godfrey, Charles. Interview by Stan Johnson. Transcript. September 27, 1973.
 Heinzer, Louis. Interview by John Esse. Transcript. February 26, 1976.
 Kaukola, William. Interview by Robert Wheeler. Transcript. February 17, 1977.
 Kinkel, Raymond. Interview by John Esse. Transcript. April 27, 1976.
 Mineau, Wirt. Interview by Helen McCann White. Transcript. September 30, 1955. Interviews with Pioneer Lumbermen (P2385).
 Ollila, John. Interview by Robert Wheeler. Transcript. May 5, 1976.
 Pete, Jacob. Interview by John Esse. Transcript. May 27, 1976.
 Werthner, Frank. Interview by John Esse with William Rajala. Transcript. May 10, 1977.

Oral History Research Office, Columbia University, New York.

Weyerhaeuser Timber Company Oral History Collection.

Bartlett, David H. Interview by Wendell Link. Transcript. 1953.

Curtis, Albert B. Interview by Ralph Hidy. Transcript. July 27, 1956.

Regional Oral History Office, Bancroft Library, University of California – Berkeley.

French, Enoch Percival and Newton Bishop Drury. Interview by Amelia Roberts Fry. Transcript. September 18, 1961.

Western Historical Manuscripts Collection, Columbia. University of Missouri.

Louisiana Central Lumber Company, records (C3660).

Wisconsin Historical Society, Madison, Wisconsin.

John Henry Goddard papers (M77-538).

Yale University, Sterling Memorial Library, New Haven, Connecticut.

Herman H. Chapman Papers (MS 134).

University of Wisconsin Digital Collections

Aldo Leopold Archive. <<http://digital.library.wisc.edu/1711.dl/AldoLeopold>>

U.S. Commission on Industrial Relations.

Unpublished records of the Division of Research and Investigation: reports, staff studies, and background research materials. Frederick, Md.: University Publications of America, 1985). 16 microfilm reels.

Newspapers:

Bemidji Daily Pioneer.

Bogalusa Enterprise.

The Caldwell Watchman.

Colfax Chronicle.
The Comrade (Winnfield, La.).
Era-Leader (Franklinton, La.).
The Lumberjack (Alexandria, La.).
Madison Journal.
Minneapolis Journal.
Princeton Union.
Rice Belt Journal.
The True Democrat (Bayou Sara, La.).
The Voice of the People (Alexandria, La.).

Books and Articles:

- Bennett, R.L. "Settlement of Cut-Over Lands," *The Southern Lumberman*, July 20, 1910.
- Blakey, Roy G. *Taxation in Minnesota*. Minneapolis: University of Minnesota Press, 1932.
- Bryant, Ralph Clement. *Logging: The Principles and General Methods of Operation in the United States*. 2nd ed. New York: John Wiley & Sons, 1923.
- _____. *Lumber: Its Manufacture and Distribution*. New York: John Wiley & Sons, 1922.
- _____. "Lumber Prices." *Annals of the American Academy of Political and Social Science* 89 (May 1920): 78-98.
- Chapman, Herman H. *Forest Valuation*. New York: John Wiley & Sons, 1915.
- _____. *Forest Mensuration*. New York: John Wiley & Sons, 1921.
- Chase, E.A. *Timber Cruising Manual and Record*. Chicago: American Lumberman, 1913.
- Committee on Land Utilization, *Land Utilization in Minnesota: A State Program for the Cut-Over Lands*. Minneapolis: University of Minnesota Press, 1934.
- Compton, Wilson. "The Price Problem in the Lumber Industry." *The American Economic Review* 7, no. 3 (1917): 582-597.
- Creel, George. "The Feudal Towns of Texas." *Harper's Weekly*, January 23, 1915.
- Cummins, Thomas R. "The Timber Cruiser: His Relation to Timber Bonds." *Annals of the American Academy of Political and Social Science* 41, supplement (1912): 62-69.

"The Dawn of a new Constructive Era: " Being the Full and Complete Report of the Cutover Land Conference of the South (New Orleans, 1917).

Dennett, Daniel. *Louisiana As It Is: Its Topography and Material Resources ... Reliable Information for Farmers, Patrons of Husbandry, Laboring Men, Manufacturers, Capitalists, Men of Enterprise, Invalids – Any Who May Desire to Settle or Purchase Lands in the Gulf States*. New Orleans: "Eureka" Press, 1876.

Dillon, Charles. *Cattle on the Cut-Over Lands: An Independent Investigation of the Livestock and Forage Possibilities of the Gulf States*. New Orleans: Southern Pine Association, 1919.

French, Truman R. *French's Scientific Timber Cruiser: A Compendium of Valuable Information for Cruisers or Estimators of Timber, Sawyers, Millmen, or Owners of Timber Lands*. Tacoma: Truman R. French, 1910.

Fuller, Clara K. *The History of Morrison and Todd Counties, Minnesota: Their People, Industries, and Institutions*. 2 vols. Indianapolis, Ind.: B.F. Bowen & Co., 1915.

Graves, Henry S. *Forest Mensuration*. New York: John Wiley & Sons, 1907.

Greeley, William B. *Forests and Men*. 1951. Reprint, New York: Arno Press, 1972.

Hall, Covington. *Labor Struggles in the Deep South and Other Writings*. Edited by David R. Roediger. Chicago: Charles H. Kerr, 1999.

Haywood, William D. *Bill Haywood's Book: The Autobiography of William D. Haywood*. New York: International Publishers, 1929.

Jesness, Oscar B., and Reynolds I. Nowell. *A Program for Land Use in Northern Minnesota: A Type Study in Land Utilization*. Minneapolis: University of Minnesota Press, 1935.

Lacey, James D. "The Science of Timber Valuation." *Annals of the American Academy of Political and Social Science* 41, supplement (1912): 9-22.

Lawson, William Pinkney. *The Log of Timber Cruiser*. New York: Duffield & Company, 1915.

Leopold, Aldo. *A Sand County Almanac and Sketches Here and There*. 1949. Reprint, New York: Oxford University Press, 1989.

Louisiana Writers' Project. *Louisiana: A Guide to the State*. New York: Hastings House, 1941.

- Marsh, George Perkins. *Man and Nature; Or, Physical Geography as Modified by Human Action*. New York: Scribner, 1864.
- Marshall, Robert. *The People's Forests*. 1933. Reprint, Iowa City: University of Iowa Press, 2002.
- McGrath, T.S. "Timber Bond Features." *Annals of the American Academy of Political and Social Science* 41, supplement (1912): 1-8.
- McWilliams, Carey. *Factories in the Field: The Story of Migrant Labor in California*. Boston: Little, Brown, 1939.
- Pinchot, Gifford, et. al. "Forest Devastation: A National Danger and a Plan to Meet It." *Journal of Forestry* 17 (1919): 911-945.
- Shaw, John W. *How to Cruise Timber: Adapted for Experienced Cruisers, Loggers, Foresters, and Claimants or for Anyone Desiring to Learn to Estimate Timber*. Portland, Ore.: John W. Shaw, 1910.
- Smith, T. Lynn and Martha Ray Fry. "The Population of a Selected 'Cut-Over' Area in Louisiana." Louisiana State University Bulletin no. 268.
- Sonderegger, V.H. "The Progress of Reforestation in Louisiana." *The Southern Lumberman*. December 22, 1923.
- Todes, Charlotte. *Labor and Lumber*. New York: International Publishers, 1931.
- Turner, Frederick Jackson. "The Significance of the Frontier in American History." In *The Frontier in American History*. New York: Henry Holt, 1921.
- Wild, E.O. "The Cut-Over Empire of Louisiana: Cheapest Productive Lands in America." *The Southern Lumberman*, December 16, 1916, 137-143.

Government Documents:

- Beck, P.G. and M.C. Forster, *Six Rural Problem Areas: Relief – Resources – Rehabilitation: An Analysis of the Human and Material Resources in Six Rural Areas with High Relief Rates*. Washington, D.C.: Government Printing Office, 1935.
- Black, John D. and L.C. Gray. "Land Settlement and Colonization in the Great Lakes States." U.S. Department of Agriculture, *Department Bulletin* No. 1295, 1925.
- Committee on Land Utilization. *Land Utilization in Minnesota: A State Program for the Cut-Over Lands*. Minneapolis: University of Minnesota Press, 1934.

- Hartman, W.A. and J.D. Black. "Economic Aspects of Land Settlement in the Cut-Over Region of the Great Lakes States." *U.S. Department of Agriculture, Circular No. 160*. Washington: GPO, 1931.
- Kossoris, Max D. and Frank S. McElroy. "Causes and Prevention of Accidents in Logging and Lumber Mills, 1940." *Monthly Labor Review* (December 1941): 1465-1485.
- Loomis, C.P., Joseph J. Lister, and Dwight M. Davidson, Jr. "Standards of Living in the Great Lakes Cut-Over Area." U.S. Department of Agriculture, Farm Security Administration, and Bureau of Agricultural Economics, Social Research Report no. 13. Washington, DC, 1935.
- Louisiana Department of Conservation. *Seventh Biennial Report of the Department of Conservation of the State of Louisiana, 1924-1926*. New Orleans: Department of Conservation, 1926.
- _____. *Fifteenth Biennial Report: State of Louisiana, 1940-1941*. New Orleans: Department of Conservation, 1942.
- _____. "Brief History of Reforestation Legislation in Louisiana and Facts Leading Up To and Regarding the Contracts Entered into Between the State Conservation Department and the Urania Lumber Company and Hardtner and Tannehill of Urania." n.d.
- Minnesota Bureau of Labor, Industries and Commerce. *Twelfth Biennial Report of the Bureau of Labor, Industries and Commerce of the State of Minnesota, 1909-1910*.
- _____. *Fourteenth Biennial Report of the Bureau of Labor and Industries of the State of Minnesota, 1913-1914*. Minneapolis: Syndicate Printing Co., 1915.
- Minnesota Department of Labor and Industry. *Second Biennial Report of the Bureau of Labor Statistics of the State of Minnesota, 1889-1890*. Minneapolis: Harrison & Smith, State Printers, 1891.
- National Resources Board. *A Report on National Planning and Public Works in Relation to Natural Resources and Including Land Use and Water Resources with Findings and Recommendations*. Washington, D.C.: Government Printing Office, 1934.
- Pennsylvania Bureau of Statistics. *Second Annual Report of the Bureau of Statistics of Pennsylvania for the Year 1873-1874*.
- Prasad, A.M., et. al. "A Climate Change Atlas for 134 Tree Species of the Eastern United States." Database (<http://www.nrs.fs.fed.us/atlas/tree>). Northern Research Station, USDA Forest Service, Delaware, Ohio. 2007-ongoing.

Sargent, Charles S. *Report on the Forest Lands of North America (Exclusive of Mexico)*. Washington, D.C.: Government Printing Office, 1884.

Scaggs, Mary Beth W. "Recent Employment Trends in the Lumber and Wood Products Industry." *Monthly Labor Review* (August 1983): 20-24.

Sonderegger, V.H. "Classification and Uses of Agricultural and Forest Lands in the State of Louisiana and the Parishes." Louisiana Department of Conservation, Division of Forestry, Bulletin no. 24, 1933.

Steer, Henry B. *Lumber Production in the United States, 1799-1946*. Washington, D.C.: Government Printing Office, 1948.

U.S. Bureau of Corporations. *The Lumber Industry*, 3 vols. Washington: Government Printing Office, 1913.

U.S. Census Bureau. Census of the United States, 1860-1940. Prepared by Social Explorer. <<http://www.socialexplorer.com>>

"Wages and Hours of Labor in the Lumber Industry in the United States, 1932." *Bulletin of the U.S. Bureau of Labor Statistics* 586. Washington: Government Printing Office, 1933.

Wiliston, Hamlin. *A Statistical History of Tree Planting in the South, 1925-1979*. Atlanta, Ga.: U.S. Department of Agriculture, Forest Service, 1980.

Secondary Sources:

Theses and Dissertations:

Ferrell, Geoffrey. "The Brotherhood of Timber Workers and the Southern Lumber Trust, 1910-1914." Ph.D. diss., University of Texas-Austin, 1982.

King, Helen. "The Economic History of the Long-Bell Lumber Company." M.A. thesis, Louisiana State University, 1936.

Reich, Steven Andrew. "The Making of a Southern Sawmill World: Race, Class, and Rural Transformation in the Piney Woods of East Texas, 1830-1930." Ph.D. diss., Northwestern University, 1998.

Books and Articles:

Aldrich, Mark. *Safety First: Technology, Labor, and Business in the Building of American Work Safety, 1870-1939*. Baltimore: Johns Hopkins University Press, 1997.

- Andrews, Thomas G. *Killing for Coal: America's Deadliest Labor War*. Cambridge, Mass.: Harvard University Press, 2008.
- Asher, Robert. "Radicalism and Reform: State Insurance of Workmen's Compensation in Minnesota, 1910-1933." *Labor History* 14, no. 1 (1973): 19-41.
- . "The Origins of Workmen's Compensation in Minnesota." *Minnesota History* 44 (Winter 1974): 142-153.
- Bachmann, Elizabeth. *A History of Forestry in Minnesota: With Particular Reference to Forestry Legislation*. St. Paul, Minn.: Minnesota State Department of Conservation, 1965.
- Bale, Anthony. "Americas' First Compensation Crisis: Conflict over the Value and Meaning of Workplace Injuries under the Employers' Liability System." In *Dying for Work: Workers' Safety and Health in Twentieth Century America*. Edited by David Rosner and Gerald Markowitz. Bloomington: Indiana University Press, 1987.
- Beckert, Sven. *The Monied Metropolis: New York City and the Consolidation of the American Bourgeoisie, 1850-1896*. Cambridge: Cambridge University Press, 2001.
- Black, Brian. *Petrolia: Landscape of America's First Oil Boom*. Baltimore: Johns Hopkins University Press, 2000.
- Bloom, Khaled J. *The Mississippi Valley's Great Yellow Fever Epidemic of 1878*. Baton Rouge: Louisiana State University Press, 1993.
- Bluestone, Barry and Bennett Harrison. *The Deindustrialization of America: Plant Closings, Community Abandonment, and the Dismantling of Basic Industry*. New York: Basic Books, 1982.
- Boles, John B. and Bethany L. Johnson, eds. *Origins of the New South Fifty Years Later: The Continuing Influence of a Historical Classic*. Baton Rouge: Louisiana State University Press, 2003.
- Braverman, Harry. *Labor and Monopoly Capitalism: The Degradation of Work in the Twentieth Century*. New York: Monthly Review Press, 1974.
- Budenz, Louis Francis. *The Techniques of Communism*. Chicago: Regnery, 1954.
- Burns, Anna C. *A History of the Louisiana Forestry Commission*. Natchitoches, La.: Northwestern State College, 1968.
- . *A History of Kisatchie National Forest*. U.S. Forest Service, 1994.

- _____. "The Gulf Lumber Company, Fullerton: A View of Lumbering During Louisiana's Golden Era." *Louisiana History* 20, no. 2 (1979): 197-207.
- Carrigan, Jo Ann. *The Saffron Scourge: A History of Yellow Fever in Louisiana*. Lafayette, La.: Center for Louisiana Studies, University of Southwestern Louisiana, 1994.
- Chandler, Alfred D. *The Visible Hand: The Managerial Revolution in American Business*. Cambridge: Harvard University Press, 1977.
- Childers, William T. *Echoes from the Millpond: A Brief History of the Louisiana Central Lumber Company, Clarks, Louisiana, 1902-1953*. Columbia, La.: The Caldwell Parish Library, 1987.
- Chrislock, Carl H. *The Progressive Era in Minnesota, 1899-1918*. St. Paul: Minnesota Historical Society, 1971.
- Clark, Christopher. *The Roots of Rural Capitalism: Western Massachusetts, 1780-1860*. Ithaca, N.Y.: Cornell University Press, 1990.
- Cronon, William. "The Trouble with Wilderness." In *Uncommon Ground: Rethinking the Human Place in Nature*, edited by William Cronon, 69-90. New York: W.W. Norton, 1996.
- _____. *Changes in the Land: Indians, Colonists, and the Ecology of New England*. New York: Hill and Wang, 1983.
- _____. *Nature's Metropolis: Chicago and the Great West*. New York: W.W. Norton, 1991.
- Cowie, Jefferson and Joseph Heathcott. *Beyond the Ruins: The Meanings of Deindustrialization*. Ithaca: Cornell University Press, 2003.
- Cowie, Jefferson R. *Capital Moves: RCA's Seventy-Year Quest for Cheap Labor*. 1999. Reprint, New York: New Press, 2001.
- Cox, Thomas R. *The Lumberman's Frontier: Three Centuries of Land Use, Society, and Change in America's Forests*. Corvallis: Oregon State University Press, 2010.
- _____. "A Tale of Two Journals: Fifty Years of *Environmental History* – and its Predecessors." *Environmental History* 13, no. 1 (2008): 9-40.
- Drushka, Ken and Hannu Konttinen. *Tracks in the Forest: The Evolution of Logging Machinery*. Helsinki: Timberjack Group, 1997.

- Dubofsky, Melvin. *We Shall Be All: A History of the Industrial Workers of the World*. Chicago: Quadrangle, 1969.
- Ellis, John H. *Yellow Fever and Public Health in the New South*. Lexington: University Press of Kentucky, 1992.
- Engberg, George B. "Collective Bargaining in the Lumber Industry of the Upper Great Lakes States." *Agricultural History* 24, no. 4 (1950): 205-211.
- Ferrell, Jeff and Kevin Ryan. "The Brotherhood of Timber Workers and the Southern Trust: Legal Repression and Worker Response." *Radical America* 19, no. 4 (1985): 55-74.
- Fickle, James E. "Race, Class, and Radicalism: Wobblies in the Southern Lumber Industry, 1900-1916." In *At the Point of Production: The Local History of the I.W.W.* Edited by Joseph R. Conlin. Westport, CT: Greenwood Press, 1982.
- _____. *The New South and the "New Competition": Trade Association Development in the Southern Pine Industry*. Urbana: University of Illinois Press, 1980.
- _____. "Forest Products: The South's 'Forgotten Industry.'" *Journal of Mississippi History* 66, no. 1 (2004): 1-16.
- Fink, Leon. "The Great Escape: How a Field Survived Hard Times." *LABOR: Studies in Working Class History of the Americas* 8, no. 1 (2011): 109-115.
- Fishback, Price V. and Shawn Everett Kantor. *A Prelude to the Welfare State: The Origins of Workers' Compensation*. Chicago: University of Chicago Press, 2000.
- Foster, John Bellamy. *Marx's Ecology: Materialism and Nature*. New York: Monthly Review Press, 2000.
- Freeberg, Ernest. *Democracy's Prisoner: Eugene V. Debs, the Great War, and the Right to Dissent*. Cambridge: Harvard University Press, 2008.
- Frelich, Lee E. and Peter B. Reich. "Old Growth in the Great Lakes Region." In *Eastern Old-Growth Forests: Prospects for Rediscovery and Recovery*, edited by Mary Byrd Davis. Washington, D.C.: Island Press, 1996.
- Friedman, Steven K. and Peter B. Reich. "Regional Legacies of Logging: Departure From Presettlement Forest Conditions in Northern Minnesota." *Ecological Applications* 15, no. 2 (2005): 726-744.
- Gates, Paul W. *The History of Public Land Law Development*. Washington, D.C.: Government Printing Office, 1968.

- Goodwyn, Lawrence. *The Populist Moment: A Short History of the Agrarian Revolt in America*. New York: Oxford University Press, 1978.
- Gordon, Robert. "'Shell No!': OCAW and the Labor-Environmental Alliance." *Environmental History* 3, no. 4 (1998): 460-487.
- Gough, Robert. *Farming the Cutover: A Social History of Northern Wisconsin, 1900-1940*. Lawrence: University of Kansas Press, 1997.
- Green, James R. "The Brotherhood of Timber Workers 1910-1913: A Radical Response to Industrial Capitalism in the Southern U.S.A." *Past and Present* 60 (1973): 161-200.
- _____. *Grass Roots Socialism: Radical Movements in the Southwest, 1895-1943*. Baton Rouge: Louisiana State University Press, 1978.
- Gutman, Herbert G. "Work, Culture, and Society in Industrializing America, 1815-1919." *The American Historical Review* 78, no. 3 (1973): 531-588.
- Hall, Jacquelyn Dowd, et al. *Like a Family: The Making of a Southern Cotton Mill World*. Chapel Hill: University of North Carolina Press, 1987.
- Harvey, David. *The Limits to Capital*. 1982. Reprint, London: Verso, 2006.
- _____. "The Spatial Fix – Hegel, Von Thunen, and Marx." *Antipode* 13, no. 3 (1981): 1-12.
- Haynes, John E. "Revolt of the 'Timber Beasts': IWW Lumber Strike in Minnesota." *Minnesota History* 42, no. 5 (1971): 163-174.
- Hays, Samuel P. *Wars in the Woods: The Rise of Ecological Forestry in America*. Pittsburgh: Pittsburgh University Press, 2007.
- _____. *The American People and the National Forests: The First Century of the U.S. Forest Service*. Pittsburgh, Pittsburgh University Press, 2009.
- _____. *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920*. Cambridge: Harvard University Press, 1959.
- Haywood, William D. and Frank Bohn. *Industrial Socialism*. Chicago: Charles H. Kerr, 1911.
- Herod, Andrew. "Workers, Space, and Labor Geography." *International Labor and Working-Class History* 64 (2003): 112-138.
- Hidy, Ralph W., Frank Earnest Hill, and Allan Nevins. *Timber and Men: The Weyerhaeuser Story*. New York: Macmillan, 1963.

- Holloway, John. "Capital Moves." *Capital & Class* 57 (1995): 136-144.
- Howard, John C. *The Negro in the Lumber Industry*. Report No. 19. Philadelphia: University of Pennsylvania, 1970.
- Huberman, Leo. *The Labor Spy Racket*. New York: Modern Age Books, 1937.
- Humphreys, Margaret. *Yellow Fever and the South*. New Brunswick: Rutgers University Press, 1991.
- Hurst, James Willard. *Law and Economic Growth: The Legal History of the Lumber Industry in Wisconsin, 1836-1915*. 1964. Reprint, Madison: University of Wisconsin Press, 1984.
- Igler, David. *Industrial Cowboys: Miller & Lux and the Transformation of the Far West, 1850-1920*. Berkeley: University of California Press, 2001.
- Jacoby, Karl. *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation*. Berkeley: University of California Press, 2001.
- James, Lee M. "Restrictive Agreements and Practices in the Lumber Industry, 1880-1939." *Southern Economic Journal* 13, no. 2 (1946): 115-125.
- Jenson, Vernon. *Lumber and Labor*. New York: Farrar & Rinehart, 1945.
- Johnson, Susan Lee. *Roaring Camp: The Social World of the California Gold Rush*. New York: W.W. Norton, 2000.
- Jones, William P. *The Tribe of Black Ulysses: African American Lumber Workers in the Jim Crow South*. Urbana: University of Illinois Press, 2005.
- Judd, Richard W. *Aroostook: A Century of Logging in Northern Maine*. Orono, Me.: University of Maine Press, 1989.
- Kane, Lucile. "Selling Cut-Over Lands in Wisconsin." *Business History Review* 28, no. 3 (1954): 236-241.
- Kates, James. *Planning a Wilderness: Regenerating the Great Lakes Cutover Region*. Minneapolis: University of Minnesota Press, 2001.
- Kerr, Ed. *History of Forestry in Louisiana*. Louisiana Forestry Commission, 1958.
- Kesey, Ken. *Sometimes a Great Notion*. New York: Viking, 1964.

- Kilar, Jeremy W. *Michigan's Lumbertowns: Lumbermen and Laborers in Saginaw, Bay City, and Muskegon, 1870-1905*. Detroit: Wayne State University Press, 1990.
- King, Frank. *Minnesota Logging Railroads*. 1981. Reprint, Minneapolis: University of Minnesota Press, 2003.
- Kula, Witold. *Measures and Men*. Translated by R. Szeleter. Princeton: Princeton University Press, 1986.
- Larson, Agnes M. *The White Pine Industry in Minnesota: A History*. 1949. Reprint, Minneapolis: University of Minnesota Press, 2007.
- Laurie, Bruce. *Artisans into Workers: Labor in the Nineteenth Century*. New York: Hill and Wang, 1989.
- Lefebvre, Henri. *The Production of Space*. Translated by Donald Nicholson-Smith. Oxford: Blackwell, 1991.
- LeJeune, Keagan. *Always for the Underdog: Leather Britches Smith and the Grabow War*. Denton: University of North Texas Press, 2010.
- Lembcke, Jerry and William M. Tattam. *One Union in Wood: A Political History of the International Woodworkers of America*. New York: International Publishers, 1984.
- Leopold, Les. *The Man Who Hated Work and Loved Labor: The Life and Times of Tony Mazzocchi*. White River Junction: Chelsea Green, 2007.
- Lipin, Lawrence. *Workers in the Wild: Conservation, Consumerism, and Labor in Oregon, 1910-1930*. Urbana: University of Illinois Press, 2007.
- Lowood, Henry E. "The Calculating Forester: Quantification, Cameral Science, and the Emergence of Scientific Forestry Management in Germany." In *The Quantifying Spirit in the 18th Century*, edited by Frängsmyr, Heibron, and Rider, 315-42. Berkeley: University of California Press, 1990.
- Maher, Neil M. *Nature's New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement*. New York: Oxford University Press, 2008.
- Mann, Charles C. *1491: New Revelations on the Americas Before Columbus*. New York: Knopf, 2005.
- Marsh, R.E. "Timber Cruising on National Forests of the Southwest." *Forest History Newsletter* 13, no. 3 (1969): 22-32.

- Marx, Karl. *Capital: A Critique of Political Economy*. Vol. 1. 1867. Reprint, New York: Penguin, 1981.
- _____. *The Marx-Engels Reader*. 2nd ed. Edited by Richard Tucker (New York: W.W. Norton, 1978).
- Maybee, Rolland H. "Michigan's White Pine Era, 1840-1900." *Michigan History* 34 (1959): 385-432.
- McEvoy, Arthur F. "Working Environments: An Ecological Approach to Health and Safety." *Technology and Culture* 36, no. 2, suppl. (1995): S145-S173.
- McKiven, Henry M., Jr. *Iron and Steel: Class, Race, and Community in Birmingham, Alabama, 1875-1920*. Chapel Hill: University of North Carolina Press, 1995.
- McWhiney, Grady. "Louisiana Socialists in the Early Twentieth Century: A Study in Rustic Radicalism." *Journal of Southern History* 20, no. 3 (1954): 315-336.
- Means, D. Bruce. "Longleaf Pine Forest, Going, Going ..." In *Eastern Old-Growth Forests: Prospects for Rediscovery and Recovery*, edited by Mary Byrd Davis. Washington, D.C.: Island Press, 1996.
- Miller, Orlando W. *The Frontier in Alaska and the Matanuska Colony*. New Haven: Yale University Press, 1975.
- Montgomery, David. *Citizen Worker: The Experience of Workers in the United States with Democracy and the Free Market during the Nineteenth Century*. Cambridge: Cambridge University Press, 1993.
- _____. *Workers' Control in America: Studies in the History of Work, Technology, and Labor Struggles*. Cambridge: Cambridge University Press, 1979.
- Montrie, Chad. "Class." In *Companion to Environmental History*, edited by Douglas Cazaux Sackman. Oxford: Wiley-Blackwell, 2010.
- _____. *Making a Living: Work and Environment in the United States*. Chapel Hill: University of North Carolina Press, 2008.
- Moreton, Bethany. *To Serve God and Wal-Mart: The Making of Christian Free Enterprise*. Cambridge: Harvard University Press, 2009.
- Morn, Frank. *"The Eye That Never Sleeps": A History of the Pinkerton National Detective Agency*. Bloomington: Indiana University Press, 1982.
- Morse, Kathryn. *The Nature of Gold: An Environmental History of the Klondike Gold Rush*. Seattle: University of Washington Press, 2003.

- Noble, David F. *America By Design: Science, Technology, and the Rise of Corporate Capitalism*. Oxford: Oxford University Press, 1979.
- _____. *Forces of Production: A Social History of Industrial Automation*. New York: Knopf, 1984.
- Norwood, Stephen H. "Bogalusa Burning: The War Against Biracial Unionism in the Deep South, 1919." *The Journal of Southern History* 63, no. 3 (1997): 591-628.
- Novak, William J. "The Myth of the 'Weak' American State." *American Historical Review* 113 (2008): 752-772.
- _____. "Law, Capitalism, and the Liberal State: The Historical Sociology of James Willard Hurst." *Law and History Review* 18, no. 1 (2000): 97-145.
- O'Connor, James. *Natural Causes: Essays in Ecological Marxism*. New York: Guilford Press, 1988.
- Peck, Gunther. "Nature of Labor: Fault Lines and Common Ground in Environmental History and Labor History." *Environmental History* 11, no. 2 (2006): 212-238.
- _____. *Reinventing Free Labor: Padrones and Immigrant Workers in the North American West, 1880-1930*. Cambridge: Cambridge University Press, 2000.
- Phillips, Kimberley L. *AlabamaNorth: African-American Migrants, Community, and Working Class Activism in Cleveland, 1915-45*. Urbana: University of Illinois Press, 1999.
- Polanyi, Karl. *The Great Transformation: The Political and Economic Origins of Our Time*. 1944. Reprint, Boston: Beacon Press, 1957.
- Price, David H. *Threatening Anthropology: McCarthyism and the FBI's Surveillance of Activist Anthropologists*. Durham: Duke University Press, 2004.
- Prosser, Richard S. *Rails to the North Star: One Hundred Years of Railroad Evolution in Minnesota*. Minneapolis: Dillon Press, 1966.
- Prudham, W. Scott. *Knock on Wood: Nature as Commodity in Douglas-Fir Country*. New York: Routledge, 2005.
- Pyne, Stephen J. *Fire in America: A Cultural History of Wildland and Rural Fire*. Princeton: Princeton University Press, 1982.
- Reed, Merl E. "Lumberjacks and Longshoremen: The I.W.W. in Louisiana." *Labor History* 13, no. 1 (1972): 41-59.

- Reid, Bill G. "Colonies for Disabled Veterans in Minnesota." *Minnesota History* 39 (1965): 241-251.
- Rezabek, C.L., et al. "Regional Effects of Sulfur Dioxide and Ozone on Eastern White Pine (*Pinus Strobus*) in Eastern Wisconsin." *Plant Disease* 73, no. 1 (1989): 70-73.
- Richardson, David M., et. al. "Human Impacts in Pine Forests: Past, Present, and Future." *Annual Review of Ecology, Evolution, and Systematics* 38 (2007): 257-297.
- Richardson, Otis Dunbar. "Fullerton, Louisiana: An American Monument." *Journal of Forest History* 27, no. 4 (1983): 192-201.
- Robbins, William G. *Lumberjacks and Legislators: Political Economy of the U.S. Lumber Industry, 1890-1941*. College Station: Texas A&M University Press, 1982.
- _____. *American Forestry: A History of National, State, and Private Cooperation*. Lincoln: University of Nebraska Press, 1985.
- _____. "The United States Forest Service and the Problem of History." *The Public Historian* 15, no. 3 (1993): 41-48.
- _____. *Hard Times in Paradise: Coos Bay, Oregon, 1850-1986*. Seattle: University of Washington Press, 1986.
- Rogers, Donald. *Making Capitalism Safe: Work Safety and Health Regulation in America, 1880-1940*. Urbana: University of Illinois Press, 2009.
- Sabin, Paul. *Crude Politics: The California Oil Market, 1900-1940*. Berkeley: University of California Press, 2005.
- Sackman, Douglas. "'Nature's Workshop': The Work Environment and Workers' Bodes in California's Citrus Industry, 1900-1940." *Environmental History* 5, no. 1 (2000): 27-53.
- _____. *Orange Empire: California and the Fruits of Eden*. Berkeley: University of California Press, 2005.
- Santiago, Myrna. *The Ecology of Oil: Environment, Labor, and the Mexican Revolution, 1900-1938*. Cambridge: Cambridge University Press, 2006.
- Scott, James C. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press, 1998.

- Scranton, Philip. "Commerce and Manufacturing in *Nature's Metropolis*." *Antipode* 26, no. 2 (1994): 130-134.
- Sellers, Charles. *The Market Revolution: Jacksonian America, 1815-1846*. New York: Oxford University Press, 1991.
- Searle, Newell R. "Minnesota State Forestry Association: Seed Bed of Forest Conservation." *Minnesota History* 44, no. 1 (1974): 16-29.
- Sharp, Paul K. "The Tree Farm Movement: Its Origins and Development." *Agricultural History* 23, no. 1 (1949): 41-45.
- Simon, Bryant. *Fabric of Defeat: The Politics of South Carolina Millhands, 1910-1948*. Chapel Hill: University of North Carolina Press, 1998.
- Sklar, Martin J. *The Corporate Reconstruction of American Capitalism, 1890-1916: The Market, Law, and Politics*. Cambridge: Cambridge University Press, 1988.
- Smith, Neil. *Uneven Development: Nature, Capital, and the Production of Space*. 3rd ed. Athens, Ga.: University of Georgia Press, 2008.
- Soluri, John. *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States*. Austin: University of Texas Press, 2005.
- Soja, Edward. *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*. London: Verso, 1989.
- Sommer, Barbara W. *Hard Work and a Good Deal: The Civilian Conservation Corps in Minnesota*. St. Paul: Minnesota Historical Society, 2008.
- Steen-Adams, Michelle M., Nancy Langston, and David J. Mladenoff. "White Pine in the Northern Forests: An Ecological and Management History of White Pine on the Bad River Reservation of Wisconsin." *Environmental History* 12, no. 3 (2007): 595-629.
- Steen, Harold K. *The U.S. Forest Service: A History*. Seattle: University of Washington Press, 1976.
- _____, ed. "Capital Gains for Forest Lands: The Origins of the 1944 Tax Legislation." *Journal of Forest History* 22, no. 3 (1978): 146-148.
- Taylor, Alan. "Unnatural Inequalities: Social and Environmental Histories." *Environmental History* 1, no. 4 (1996): 6-19.
- Thompson, E.P. "Time, Work-Discipline and Industrial Capitalism." *Past & Present* 38 (1967): 56-97.

- _____. *The Making of the English Working Class*. New York: Pantheon, 1963.
- Trotter, Joe W. *Black Milwaukee: The Making of an Industrial Proletariat*. Urbana: University of Illinois Press, 1985.
- _____. *Coal, Class, and Color: Blacks in Southern West Virginia, 1915-32*. Urbana: University of Illinois Press, 1990.
- Tyler, Robert L. *Rebels of the Woods: The I.W.W. in the Pacific Northwest*. Eugene: University of Oregon Press, 1967.
- Weinstein, James. *The Corporate Ideal in the Liberal State: 1900-1918*. Boston: Beacon Press, 1968.
- White, Richard. *The Organic Machine: The Remaking of the Columbia River*. New York: Hill and Wang, 1995.
- _____. "Poor Men on Poor Lands: The Back-to-the-Land Movement of the Early Twentieth Century." In *Experiences in a Promised Land: Essays in Pacific Northwest History*. G. Thomas Edwards and Carlos A. Schwantes, eds. Seattle: University of Washington Press, 1986.
- Williams, Michael. *Americans and Their Forests: A Historical Geography*. Cambridge: Cambridge University Press, 1989.
- Williams, Raymond. "Decentralism and the Politics of Place." In *Resources of Hope: Culture, Democracy, Socialism*, edited by Robin Gale. London: Verso, 1989.
- Woodward, C. Vann. *The Origins of the New South, 1877-1913*. Baton Rouge: Louisiana State University Press, 1951.
- Wright, Gavin. *Old South, New South: Revolutions in the Southern Economy Since the Civil War*. New York: Basic Books, 1986.
- Zieger, Robert H. *Rebuilding the Pulp and Paper Workers' Union, 1933-1941*. Knoxville: University of Tennessee Press, 1984.