

THE UNIVERSITY OF CHICAGO

MIGRANT CLIMATES: HOBOS, ENERGY, AND CLIMATE PRECARITY IN THE GREAT PLAINS,
1870-1940

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE DIVISION OF THE SOCIAL SCIENCES
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
DEPARTMENT OF HISTORY

BY
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CHICAGO, ILLINOIS

AUGUST 2021

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Acknowledgements

Writing a dissertation often whips between feeling like an utterly lonesome experience and feeling like a community endeavor. The year 2020 made that feeling all the more acute. The isolation that fighting the SARS-CoV-2 pandemic required derailed the big archival trip I had planned, but it also cut everyone off from everyone else. The experience of being alive in 2020 was one of slowly reknitting together our communities over the internet, across glass partitions, or through facemasks, sitting six feet apart. It underscored the value of relationships, and how important they were to any endeavor. To me, it thus feels more important than ever to acknowledge those who aided in the creation of this project.

First thanks of course go to the archivists on whose work I rely. It is often remarked that whenever a historian claims to have “found” some amazing new source, it is usually something that is already in the finding aids of an archive. While my archival travel was largely cut short, the American Heritage Center and Newberry Library stand out as outstanding places to do research; Molly Marcusse of the American Heritage Center was particularly valuable in helping me secure funding to do travel and research in Wyoming.

But special mention ought to go to those scholars who have lent me time and energy far beyond what I deserve as a graduate student who will never appear on their CVs. Among them are Emily Pawley, who has been a good conference friend, sometimes reader, and willing participant in lengthy rambling conversations in which I have tried to clarify my work, Dagomar Degroot, who likewise happily sat down with me for well over an hour as I tried to figure out exactly what “climate history” meant, (Frank) Toby Higbie, who noticed a thread on academic Twitter and wrote me a very long (and very welcome) guide on how I might retool my dissertation around digital sources, Ariel Ron, who has been a frequent

sounding board for all sorts of ideas about labor, energy, and economic history in the nineteenth century, Jeff Schramm, who has been a valuable resource on railroads, and others. Still more charitable are my fellow graduate students and precarious academics, who lent me time that was already undercompensated: Betsy Pingree, who gladly shared gigabytes of sources on the US Committee on Industrial Relations (published and unpublished), Nathan Ellstrand, who has been a writing accountability buddy through the home stretch of the dissertation and a friend in the world of Western history, Karen Sieber, who helped me think about the significance of hobos, David Fouser, who has been a conference friend and an excellent resource on wheat, and Emmanuel Falguières, who went from randomly stumbling across my profile on Twitter to willingly talking about the built environment for over an hour at a conference. One common thread here, I think, is that social media is a surprisingly valuable tool for historians: academic Twitter has connected me to a whole new network that I would never otherwise have met. Thanks also go to my old undergraduate advisor, Ted Melillo—he is my model for what I think a historian should become.

My student network at Chicago has been critical to every part of forging a dissertation, especially Nick Foster, Alyssa Smith, Evelyn Kessler, Trish Kahle, Alex Hoffman, Julia Mead, Rohan Chatterjee, Andrew Seber, and Leila Blackbird. Somewhat vaguer but no less real thanks should go to the organizing efforts of GSU for attempting—and quite obviously succeeding—in leveraging the threat of unionization to secure better living conditions for graduate students across my stay at the school. The Environmental Studies Workshop has been a wonderful and supportive community, as has the US History and Cultures Workshop (formerly the Social History Workshop, later the US History Workshop).

I am greatly indebted to professors at the University of Chicago, especially Elisabeth Moyer, Gabe Winant, and Elizabeth Chatterjee. Professor Moyer is at this point a longtime collaborator. Our work together on energy history has completely reshaped what I think interdisciplinary work can and should do. The resources of her working group, the center for Robust Development on Climate and Energy Policy (RDCEP) enabled the beautiful Sankey visualizations and research that appear periodically throughout this dissertation. (Here, I should also shout out our collaborator, Nathan Matteson, who does not fit neatly into any of these categories, but is the design expert who managed to animate a Sankey diagram—which turns out to be an interesting and difficult computational problem that otherwise would have proved intractable.) Professors Winant and Chatterjee have been invaluable in sharpening my instincts in labor and environmental history, respectively, and though they came very late into my graduate tenure, they were extremely willing to help me articulate precisely what my dissertation meant.

Amy DeFalco Lippert was a patient and brilliant shepherd through the dissertation proposal process and the drafting of the first parts of this dissertation. Academia simply does not deserve the people it rejects.

My greatest scholarly debts are of course owed to my committee, especially Fredrik Albritton Jonsson and Amy Dru Stanley, who are both individually and as a team marvelous co-chairs, who have each been pivotal in shaping my graduate career. My readers, Jon Levy and Mark Fiege, were both willing to come on quite late in the process, and have provided eyes both keen and kind, somehow managing to balance useful critical feedback with the difficult task of keeping a graduate student's ego intact.

I also simply could not have made it through graduate school without the love and support of my family and friends. My parents, Joan and Bryan, new parents Lorri and Robert, brothers Jim and Bill, and newly-made sisters Lauren, Hannah, and Mel, my nephew Jack and soon-to-be niece have all kept me grounded through the long and lonely endeavor that is poking through tens of thousands of newspaper entries. My friends have likewise for some reason stuck by my side, even though my conversations have increasingly been restricted to the topics of the Anthropocene, capitalism, and my dog and cat. Among them, I would like to specifically single out Brian Kim, Jack Tran, and Simon Gao (for keeping me sane with board games and listening to my lengthy rants), Matt Musser, Thomas Berube-Giguere, Alex DeBruyne, Joe Gosnell, and Simon Ospensen (for encouraging me to watch, read, and write things that were not history or environmental studies), Victor Pesola, Tony DeLuca, and Jason Green (for grounding me), and Robert Gruener (for a quarantine pod that was full of joy and warmth), each of whom have provided both extensive support and spaces for relaxation and healing.

Last and most important, of course, is someone who fits into nearly every one of the above categories, and more: Emily. I could not ask for a better life partner, a better reader, a better discussant, or a better friend. Luck brought us into the same graduate cohort; love carried us the rest of the way. I cannot begin to thank her for carrying me through the graduate school experience; I can't wait to see what the next chapter of our life together brings. This dissertation is quite simply a love letter to her.

Abstract

This dissertation explores the environmental history of the origins of migrant work in the United States between 1870 and 1940. These migrant workers, often called “hobos,” circulated through the Midwest, Great Plains, and Mountain West, providing vital ad hoc labor in agriculture, mining, forestry, and construction. Hobos often worked on any given job for less than a week, never settling in a single place for long. Their itinerancy and homelessness caused them to live outside the law, and they were often forced to steal train rides illegally between jobs, camping alongside the tracks; they were always in danger of being beaten, imprisoned, or turfed to another town by suspicious local police. Totalling somewhere over 100,000 people, mostly white men, they were the single most economically important subgroup of the roughly 1-2 million seasonal workers who lived in the late nineteenth and early twentieth century United States. Hobo labor played a central role in the extractive economy of the American West that was itself critical to the United States’ rise as an industrial power in this period.

In this project, I argue that the hobo way of life was the product of two environmental factors: energy and climate. First, I argue that the energy economy of the nineteenth century United States—and even that of the early twentieth century—relied on muscle power for key operations, despite the rising use of steam engines. While Americans harnessed steam for large-scale work, especially in moving freight (railroads) and in providing power for urban industrial operations (factories), medium- and small-scale work required either draft animals (and the men to guide them) or human laborers. Steam engines were simply too bulky for mobile work. But although every part of the country needed muscle power, local environments significantly shaped the use of that muscle power. Second, I argue that the

unpredictable climate of the American West made the region's demand for manual labor likewise unpredictable. Employers in extractive industries hired more or fewer men depending on environmental conditions that could vary from day to day without warning. In doing so, employers took climate risk (e.g., the chance that drought could destroy crops) and shunted it onto their workforce. These migrant laborers therefore lived in a system of climate precarity, with extreme unpredictability in their earnings and day to day lives. This system lasted until the rise of the internal combustion engine, which provided scalable power across the West in the form of tractors and trucks, which could operate closer to the point of extraction than steam engines. Where before, climate risk had been absorbed by hobos, fossil fuels now absorbed much of that risk. Consequently, most migrant labor after 1920 shifted to less ad hoc forms of work—work that could be planned far in advance, allowing for the arrangement of transnational migrant labor from Mexico.

While prior observers have noted the seasonal nature of migrant work (and the low populations that drew workers to the West), simple seasonality is insufficient to describe the hobos' transience. In this dissertation, I instead analyze the environment as dynamic, entangled with human systems of technology, society, and law, and not entirely under human control. In this vein, the hobo emerged from multiple human and non-human systems. No one intentionally created the hobo, nor managed their movements (although some tried). The system that resulted inconvenienced employers, angered local communities, and impoverished and broke the bodies of the hobos themselves. Yet it persisted, in large part because no one could find a better system for securing labor that was needed very quickly and very unpredictably. This goes a long way to explaining why employers so quickly substituted human labor with an energy innovation when it became available. It also shows

that their precarity was not an inevitable consequence of capitalism, nor an inevitable consequence of the ecological conditions of the West—rather, it shows that the West’s ecology and climate magnified American society’s general disregard for worker welfare.

Moreover, where many labor histories focus on urban spaces, on the evolution of factory work and discipline, and the struggles between unions, corporations, and the state, hobo history is quite different. Hobos instead comprised a rural, disorganized, raucous workforce, one for whom the biggest labor struggles of the era did little. The hobo’s history shows how profoundly environments shaped worker experiences in the era of industrialization. Before the miniaturization of power that came with the internal combustion engine, any work that involved dexterity and adaptability necessarily became manual labor. Moreover, well before anthropogenic climate change in the twentieth century, climate shaped human workscapes. Their history also illustrates the tremendous human costs of integrating the American West into the capitalist world-system. It was only through mass exploitation and immiseration, and the movement of millions of migrant workers, that the West became as productive as it did.

Perhaps the biggest takeaway of this project lies in the fact that energy systems—mediated by ecology and sociocultural forces—can profoundly shape not only how people work, but also the lives of workers away from the workscapes themselves. Migrant work has existed in many different forms across world history. But it was only in the era of steam and capitalism, and in a place of climatic instability, that these workers ended up persistently itinerant and homeless. This group simply would not have taken the shape they did without the unique confluence of the division between steam and muscle power, the use of railroads, legal systems meant to keep workers peripatetic, and a climate that ensured constant

unpredictability. Changing just one of these factors—the underlying energy regime—ended up radically reshaping both rural workscapes and the overarching form of migrant labor beyond recognition. While the hobos’ form of climate precarity is thus particular to this time and place, it does not preclude future iterations of climate precarity built on new energy systems.

This dissertation is split into four chapters. Chapter One explores the simultaneous expansion of the United States into the American West, the rise of steam power, and the emergence of hobos. It defines the theory of “work regimes,” in which human and nonhuman forces constrain how workers operate in an economy. In this period, the American economy constantly grew, fueled by settler colonial bounties of soil and energy, but this growth required increasing muscle power. In the American West, that was unsustainable—the climate’s instability made these requirements extremely unpredictable. Ultimately, the solution was migrant labor, made temporary by ecology, mobile by technology, and precarious by law and economy. The chapter leans heavily on quantitative evidence about the American energy economy as a whole, and extensive qualitative evidence about the legal and economic systems hobos navigated—a regime of coal, hobos, and dirt.

Chapter Two roots these trends in the specific example of the wheat industry, showing that the constant threat of drought forced hobos hoping to make money as harvest hands to hover in precarity for days or weeks at a time. In it, I compile data from hundreds of state newspapers in Kansas, Nebraska, and North and South Dakota to show how harvest hand employment not only varied with the climate, but how climatic instability often only became apparent as harvest hands already arrived in the state. This made it virtually impossible to plan ahead for labor, as the demand for harvest hands could vary dramatically

even from year to year. Though government and union action pointed the way to possible alternative systems, they all entailed too many sacrifices on the part of one actor or another, so the hobo system—which no one particularly liked—ended up persisting.

Chapter Three follows hobos back to their winter haunts in cities, arguing that climate and ecology both drove the seasonal migration to cities and played a role in their radical politics. It delves into hobo stories of companionship, into the ways they organized self-government in jungles and other temporary migrant camps, into traveling around cities, and into the politics they wrote about and practiced. Drawing on evidence of the built environment, nonhuman environments, and the challenges hobos faced and solutions they devised, I show that hobos' relationship to space fundamentally radicalized them—it exposed them to and forced them to practice anti-capitalist ideologies.

Finally, Chapter Four concludes the study by connecting the rise of oil and the decline of the hobo, and links these developments to a broader labor transition paralleling the energy transition of the 1920s. Effectively, the adoption of oil simultaneously undermined hobo survival strategies and made seasonal labor more predictable for farmers. When farmers sought new laborers for new crops, they turned now to Mexican migrant workers—who were cheaper, but required planning far in advance. It was the sort of arrangement that would not have been possible in the age of steam and wheat—oil made it possible to move beyond ad hoc and temporary contracts. The result was a new work regime—one of oil, Mexicans, and fertilizers—and in which climatic risk was mitigated by fossil fuels.

Introduction

He has no name. “BELGIAN. FIFTY-EIGHT. COAL MINER, LUMBER JACK; CHICAGO IN WINTER; SINGLE; SELDOM PENNILESS.” The man’s entry is typical of Nels Anderson’s interview notes. He came to America, about twenty years old, in the great tide of trans-Atlantic immigrants. His family became farmers; he became a wanderer. When the settlers of southern Illinois opened its coal seams, extracting fossil energy that made the United States an industrial power and changing the climate of the Earth, his hands dug coal. When loggers felled the mighty white pines of Wisconsin, transforming old growth forest into the “cutover district,” his hands held an axe; his hands piloted logs downriver. When the intricate ecology of Central Kansas and North Dakota turned from prairie to endless, shimmering waves of wheat, bound for the bellies of families in New York or London, his hands cut the wheat, shoveled it into the hopper of a thresher, and bagged it for the railroad. More than that—his hands built one of the railroads that carried it.¹ Perhaps this anonymous man’s life seems extraordinary. Perhaps he sounds like a forgotten adventurer—few people have touched so much of history while remaining so utterly unknown. In truth, though, there are hundreds more like him in Anderson’s interviews alone. The American government had interviewed dozens more only a few years prior.² More than a hundred thousand roamed the rails in the early twentieth century. Homeless, nameless, most of their stories were never written down; their legacy lies only in the world that they built.

¹ Nels Anderson, “Document 11,” Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago Special Collections, Chicago, IL.

² *U.S. Commission on Industrial Relations, 1912-1915: Unpublished Records of the Division of Research and Investigation: Reports, Staff Studies, and Background Research Materials*, microfilm collection, reel 6.

This dissertation is an environmental history of the origins of migrant work in American life, from about 1870 to 1940. It examines the lives of hobos—turn-of-the-century homeless migrant workers who performed menial work on every fringe of American society. A typical hobo was born into a working-class family in a city or small town. They uprooted themselves to find work or to escape their home life, stealing railroad rides across the country and working a plethora of ad hoc jobs. They braved police reprisals and subzero temperatures to do dangerous work in some of the harshest parts of the United States. During an unprecedented economic boom, literally every major industry in the industrial American West depended on the work of hobos; in return, society maligned them. Why would anyone choose this life? And why did this confusing, mostly illegal labor system come about in the first place?

In this dissertation, I argue that the hobo way of life was the product of two environmental factors: energy and climate. Though the nineteenth century United States famously employed coal and steam, in its Western periphery, it relied instead on an energy system of intensified human labor. Territory, manual labor, and wealth all grew in tandem—but encountered a serious problem in the American West. The region's climate, prone to sudden droughts and harsh winters, made outdoor work utterly unpredictable; as a result, employers had to find labor systems that could scale up or down to match it. Their solution was an ad hoc labor force that could be hired and fired at a moment's notice—migrant workers who stowed away on railroads to get from the nation's urban core to its rural periphery, and who provided cheap, scalable, physical power in its fields, forests, and mines. This migrant work regime, founded on steam power and climate precarity, endured for nearly sixty years before the rise of the internal combustion engine reshaped it. Though

steam age America relied on muscles in its periphery, internal combustion engines could perform much of that work themselves, replacing harvest hands with tractors and combines and horse teams with trucks. The decline of the steam train in midcentury America undermined illicit migrant transport. The patch for the climate problem became fossil fuels, not workers. Together, these effects removed the need for ad hoc labor, rendered the hobo disposable, and prompted their replacement with longer-term Mexican migrant workers. The rise and replacement of the hobo work regime is, at its heart, a story of climate precarity, one predating the tangible effects of anthropogenic climate change by a century.

The hobo lifestyle lasted from 1870 to 1940, with its peak between 1910 and 1920.³ Though some Americans migrated for work in the antebellum period, migration transformed both qualitatively and quantitatively beginning in 1877, when a series of long depressions put thousands of Americans out of work—a so-called “army of tramps.”⁴ By the 1880s, these wanderers became a permanent migratory class, finding work at the western fringes of the North American continent where railroads and indigenous dispossession opened vast landscapes to massive capitalist exploitation.⁵ At its peak, this system employed somewhere

³ Mark Wyman, *Hoboes: Bindlestiffs, Fruit Tramps, and the Harvesting of the West* (New York: Hill and Wang, 2010), p. 7; Todd DePastino, *Citizen Hobo: How a Century of Homelessness Shaped America* (Chicago: University of Chicago Press, 2003), pp. xxii-xxv.

⁴ For early migrant work, see David Schob, *Hired Hands and Plowboys: Farm Labor in the Midwest, 1815-60* (Urbana, Illinois: University of Illinois Press, 1975). Depastino, *Citizen Hobo*, pp. 3-29; Amy Dru Stanley, *From Bondage to Contract: Wage Labor, Marriage, and the Market in the Age of Slave Emancipation* (New York: Cambridge University Press, 1998), pp. 98-137.

⁵ The entrance of tramps into the wheat labor market is explored in depth in Peter Argersinger and Jo Ann Argersinger, “The Machine Breakers: Farmworkers and Social Change in the Rural Midwest of the 1870s,” *Agricultural History* 58, no. 3 (July 1984); the longer term employment is explored in Gavin Wright, “American Agriculture and the Labor Market: What Happened to Proletarianization?” *Agricultural History*, Summer 1988, Vol. 62, no. 3, pp. 182-209, and LaWanda Cox, “The American Agricultural Wage Earner, 1865-1900: The Emergence of a Modern Labor Problem,” *Agricultural History* 22, no. 2 (April 1948). For more on hobos and the railroad: Wyman, *Hoboes*, pp. 19-24; for hobos and resource extraction: Carlos Schwantes, *Hard Traveling: A Portrait of Work Life in the New Northwest* (Lincoln, Nebraska: University of Nebraska Press, 1994); for railroads and settler colonialism, Manu Karuka, *Empire's Tracks: Indigenous Nations, Chinese Workers, and the Transcontinental Railroad* (Oakland, California: University of California Press, 2019).

over 100,000 people who moved to find work year-round, sleeping in “flophouses,” railyards, and “jungles” by the railroad-side. Around these dedicated hobos, about two million people lived as sometimes migrant workers, drifting in and out of the migrant life depending on their circumstances. Adjacent to them were the poor, jobless, and homeless; many workers drifted between all three groups.⁶ Annually, between 40-120,000 migrants worked the grain harvests of Kansas and the Dakotas, perhaps 100,000 cut lumber and ice, mostly in winter, another 100,000 mined copper, silver, gold, iron, and lead, and hundreds of thousands more worked odd summer jobs building railroads and towns, herding cattle, canning salmon—with each hobo usually counting several times over as they moved from job to job.⁷ In the

⁶ Contemporary estimates of the hobo population varied widely, and precise figures are impossible to derive owing to the intrinsic secrecy of hobo life. One contemporary estimate by Harry Beardsley of the Chicago news in 1917 placed the number of persons riding the rails without paying as between 60,000-150,000 every year (based on railroad companies’ own estimates), with another 2,000,000 migrant workers riding legally (paid for by their employer or themselves, this estimate from “The Encyclopedia Hobocannia”); see Harry Beardsley, “Along the Main Stem with Red,” unpublished paper, 1917, pp. 1-3, Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago Special Collections, Chicago, IL. These estimates accord with estimates of Chicago’s homeless population and the number of “migratory men pass[ing] through the city” in a normal year—300,000 to 500,000; see Nels Anderson, *On Hoboes and Homelessness* (Chicago: University of Chicago Press, 1998), p. 32. In 1933, Nels Anderson noted that 201,596 persons were tabulated by public and private agencies in urban areas of the United States as homeless, including persons sheltered in those agencies, in poverty camps like shantytowns and jungles or boxcars, and on the street. For various reasons (including the secrecy of homelessness and the inefficiency of these agencies), he notes this is an undercount (though the Depression makes this figure somewhat difficult to interpret for the purpose of estimating hobo populations in earlier years). See Anderson, *On Hoboes and Homelessness*, p. 137-8. The overall “migrant work force” is a somewhat nebulous category, but here includes those who moved seasonally for their work, or spent many months away from home for it. WPA administrators noted that two million people crossed state lines to find jobs in 1933; see Anderson, *On Hoboes and Homelessness*, p. 137. Higbie notes that “several million” workers took seasonal jobs, which typically required some degree of mobility; see Frank Higbie, *Indispensable Outcasts: Hobo Workers and Community in the American Midwest, 1880-1930* (Urbana, Illinois: University of Illinois Press, 2003), p. 2. If we take “two million” as a middle-ground estimate, this comprised about 2% of the total American population in 1910, and over 5% of those engaged in “gainful occupations;” see the *Thirteenth Census of the United States, Vol. 4: Population* (Washington, D.C.: Government Printing Office, 1914), p. 34. On the fluidity of these categories, Higbie notes constant movement between them, and quotes one observer as suggesting that almost every common laborer passed through this pool at some point or another; see Higbie, p. p. 102.

⁷ For lists of jobs, see Wyman, *Hoboes*, p. 273, Higbie, *Indispensable Outcasts*, pp. 2-3 and Schwantes, *Hard Traveling*, p. xi. For specific numbers on the wheat harvest, see Chapter Two of this work. For estimates of lumber workers, see Jason Newton, “Forging Titans: The Rise of Industrial Capitalism in the Northern Forest, 1850-1950” (PhD dissertation, Syracuse University, 2017), p. 22, in which he lists the 11,000-14,000 lumberjacks in the Northern Forest of New England as 7% of the total. The individual camp numbers often more than double over the course of a year, suggesting that up to half of the 100,000-200,000 total workers were transient (the rest being permanent New Englanders or French Canadians); see also Newton, “Forging

1920s, employers in these industries began to automate what labor they could, and employ credentialed technicians or transnational immigrant populations where they could not, dramatically undercutting the prevalence of domestic migrant labor.⁸

Titans,” p. 29. As explored in Newton’s dissertation, lumber was primarily a winter industry because workers used ice and sleds to facilitate moving logs from place to place. Mining industries are listed in the Thirteenth Census as employing 95,000 outside of coal—*Thirteenth Census, Vol. 4*, p. 46—with individual mines reporting truly incredible turnover—the Black Hills gold mines reported in the 1910s that 20,000 names appeared on their yearly payroll but only 2,000 laborers in any given month, suggesting workers stayed an average of a month; see U.S. Commission on Industrial Relations, *Final Report and Testimony Submitted to Congress by the Commission on Industrial Relations*, Vol. 4, (Washington, D.C.: Government Printing Office, 1916), p. 3664. It is unclear from this and Census documents whether there were c. 100,000 workers who roamed from mine to mine, or whether the population who ever engaged in mining was substantially larger than those who worked there on a permanent basis. The coal mining population was quite a bit larger than the ore mining population in this period, and it is known that some hobos engaged in both; see Ernest Watson Burgess papers; *USCIR Unpublished Records*. Note here that open pit mines (as in Butte or the Mesabi Range) shut down in winter due to snow; iron and copper mines on Lake Superior (in Minnesota and Michigan) shut down due to Lake Superior freezing over; miners often wintered as lumberjacks as a result; see Higbie, *Indispensable Outcasts*, p. 39. Exact numbers on transient construction workers are not estimated anywhere in the hobo historical literature to date or in the census, but construction work appears on virtually every hobo’s work history given to Anderson and the USCIR investigators.

⁸ On automation in agriculture, see Deborah Kay Fitzgerald, *Every Farm a Factory: The Industrial Ideal in American Agriculture* (New Haven, Connecticut: Yale UP, 2003); on the decline of hobos see Greg Hall, *Harvest Wobblies: The Industrial Workers of the World and Agricultural Laborers in the American West, 1905-1930* (Corvallis, Oregon: Oregon State University Press, 2001). In other industries, see Erik Loomis, *Empire of Timber: Labor Unions and the Pacific Northwest Forests* (New York: Cambridge University Press, 2015), pp. 21-22, and Amy Slaton, *Reinforced Concrete and the Modernization of American Building, 1900-1930* (Baltimore: Johns Hopkins University Press, 2003).



Figure 1. Map: Hobo Industries, c. 1910. Areas where wheat growers advertised for hobo harvest hands are shaded in light yellow; areas of intensive timber cutting are shaded in dark green; areas of hobo-employing mines are marked with the hammer and chisel icon. All numbers indicate employment in an area for an average year in the 1910s, with 100,000 in American wheat growing areas, 40,000 in the Canadian prairies, 100,000 in the North Woods, 55,000 in western mines, 35,000 in Upper Peninsula mines, and 70,000 in southern Illinois coal mines. The much less predictable construction market is not included in this map. SOURCE: image by author.⁹

⁹ See the previous footnote. I include employees in Illinois' coal mines because of the frequency with which Illinois coal mining specifically appears in interviews with individual hobos—whereas those further east very much do not.

Hobos are an elusive historical subject. A few acquired literary fame, but the vast majority left no trace.¹⁰ They agreed to daylong or weeklong contracts verbally, leaving little documentation of their payment or labor. Tracing where they went—and when—is often an exercise in futility. Most studies of hobos focus instead on their status as social outcasts, showing their world as a haven for countercultural and radical thought.¹¹ Their constant movement made them frequent targets of law enforcement, and suspects of violent crime across numerous cities and towns. Caged and imprisoned in moral panics regarding homosexuality and flouted gender norms, Toby Higbie, Margot Canady, and Kelly Lytle Hernández show, hobos faced the full ire of a developing American penal and police state.¹² The rising labor movement was of little help, as the only union who worked with itinerant laborers—the radical syndicalist I.W.W.—found their transience discouraged effective organizing.¹³ Ultimately, a violent and mostly-extrajudicial crackdown during the First World War obliterated the remainder of these efforts.¹⁴ Like other migrant workers—the cowboys who preceded them, their coolie and immigrant contemporaries, or the Mexican-Americans who came after—hobos found frequent exploitation, with little legal recourse or redress.¹⁵ And, like cowboys or the 49ers of the California Gold Rush, the grim and

¹⁰ John Lennon, *Boxcar Politics: The Hobo in U.S. Culture and Literature* (Amherst, Massachusetts: University of Massachusetts Press, 2014). See especially the careers of Jack London and “A-No. 1,” the pseudonym for Leon Ray Livingston.

¹¹ Higbie, *Indispensable Outcasts*; dePastino, *Citizen Hobo*; see also Margot Canady, *The Straight State: Sexuality and Citizenship in Twentieth Century America* (Princeton, New Jersey: Princeton University Press, 2011), pp. 91-134, and Kelly Lytle Hernández, *City of Inmates: Conquest, Rebellion, and the Rise of Human Caging in Los Angeles, 1771–1965* (Chapel Hill, North Carolina: University of North Carolina Press, 2017), pp. 45-63.

¹² Higbie, *Indispensable Outcasts*; Canady, *The Straight State*; Hernández, *City of Inmates*.

¹³ Nigel Anthony Sellars, *Oil, Wheat, and Wobblies: The Industrial Workers of the World in Oklahoma, 1905-1930* (Norman, Oklahoma: Oklahoma University Press, 2012).

¹⁴ Hall, *Harvest Wobblies*; Melvin Dubofsky, *We Shall Be All: A History of the Industrial Workers of the World* (Chicago: Quadrangle Books, 1969), pp. 376-444.

¹⁵ For a brief survey of cowboy historiography, see: Tim Lehman, *Up the Trail: How Texas Cowboys Herded Longhorns and Became an American Icon* (Baltimore: Johns Hopkins University Press, 2018), Mark Lause, *The Great Cowboy Strike: Bullets, Ballots, and Class Conflict in the American West* (New York: Verso Press, 2018),

unglamorous lives hobos actually lived were largely edited out by later mythologizing.¹⁶

Unlike virtually all of these groups, however, hobos moved long distances but mostly domestically; they were American migrants whose wages—when they were actually paid—tended to be quite high.¹⁷

What we know of their demographics suggests that—unlike other contemporary or later migrant workforces—hobos were mostly young and unattached, and overwhelmingly white and male.¹⁸ As a result, historian Todd DePastino has termed hoboemia “a preserve

David Iglar, *Industrial Cowboys: Miller and Lux and the Transformation of the Far West, 1850-1920* (Berkeley: University of California Press, 2001). For contemporary migrant workers, see Moon Ho-Jung, “Outlawing “Coolies”: Race, Nation, and Empire in the Age of Emancipation,” *American Quarterly* 57, no. 3 (September 2005); Cindy Hahamovitch, *The Fruits of Their Labor: Atlantic Coast Farmworkers and the Making of Migrant Poverty, 1870-1945* (Chapel Hill, North Carolina: University of North Carolina Press, 2010); Gunther Peck, *Reinventing Free Labor: Padrones and Immigrant Workers in the North American West, 1880-1930* (New York: Cambridge University Press, 2010). Hobos and Mexican-Americans are directly compared in Carey McWilliams, *Factories in the Field: The Story of Migratory Farm Labor in California* (Boston: Little, Brown, and Company, 1944). For a broader overview of Mexican-American migrant labor historiography, see: Mae Ngai, *Impossible Subjects: Illegal Aliens and the Making of Modern America* (Princeton, New Jersey: Princeton University Press, 2004); Kelly Lytle Hernández, *Migra! A History of the U.S. Border Patrol* (Berkeley: University of California Press, 2010); Lori Flores, *Grounds for Dreaming: Mexican Americans, Mexican Immigrants, and the California Farmworker Movement* (New Haven, Connecticut: Yale University Press, 2016); Deborah Cohen, *Braceros: Migrant Citizens and Transnational Subjects in the Postwar United States and Mexico* (Chapel Hill, North Carolina: University of North Carolina Press, 2011); S. Deborah Kang, *The INS on the Line: Making Immigration Law on the U.S.-Mexico Border, 1917-1954* (New York: Oxford University Press, 2017); Frank Barajas, *Curious Unions: Mexican American Workers and Resistance in Oxnard, California, 1898-1961* (Lincoln, Nebraska: University of Nebraska Press, 2012); Lawrence Cardoso, *Mexican Emigration to the United States, 1897-1931: Socio-Economic Patterns*, (Tucson: University of Arizona Press, 1980); Francisco Balderrama and Raymond Rodriguez, *Decade of Betrayal: Mexican Repatriation in the 1930s* (Albuquerque: University of New Mexico Press, 1995); John Weber, *From South Texas to the Nation: The Exploitation of Mexican Labor in the Twentieth Century*, (Chapel Hill: University of North Carolina Press, 2015); Zaragosa Vargas, *Labor Rights are Civil Rights: Mexican American Workers in Twentieth-Century America*, (Princeton, New Jersey: Princeton University Press, 2007), and Mary E. Mendoza, “Traacherous Terrain: Environmental Control at the U.S.-Mexico Border,” *Environmental History* 23, no. 1 (January 2018). For still later migrant workers, see Ana Raquel Minian, *Undocumented Lives: The Untold Story of Mexican Migration* (Cambridge, Massachusetts: Harvard UP, 2018); Deborah Fink, *Cutting into the Meatpacking Line: Workers and Change in the Rural Midwest* (Chapel Hill, North Carolina: University of North Carolina Press, 1998); and Leon Fink, *The Maya of Morganton: Work and Community in the Nuevo New South* (Chapel Hill, North Carolina: University of North Carolina Press, 2003).

¹⁶ Susan Johnson, *Roaring Camp: The Social World of the California Gold Rush* (New York: W. W. Norton & Co., 2000); Lehmann, *Up the Trail*.

¹⁷ Wright, “American Agriculture and the Labor Market.”

¹⁸ Almost half were under 30, and about 97-98% were white; 97-98% were male. Anderson, *On Hobos and Homelessness*, pp. 82-3. Contrast this with the roughly 25-35% of cowboys who were black, Mexican, or indigenous, and the frequent traveling of entire families in later migrant workforces.

of working-class whiteness” and a “domain of masculinity.”¹⁹ Evidence from hobo interviews does not support this idea, however—while some hobos were certainly racist, hobo encampments as a whole were “extremely hospitable and democratic.”²⁰ Jobsite discrimination mostly came on the part of policing in communities through which migrants passed, or employers, who leveraged racism “selectively to divide and discipline workers when it suited their purposes.”²¹ Overall, the skew towards whiteness likely reflects the demographics of the working class in northern states before the Great Migration.²² Similarly, though male-dominated, hobo life was not exclusively so. Itinerant hobos moved parallel to networks of radical and itinerant women, and women who sought to escape traditional gender roles mostly found acceptance and camaraderie in hobo spaces. Nevertheless, employers usually sought men for the heavy manual labor performed in remote rural jobsites, skewing the demographics heavily.²³ As a result, hoboemia remained homogenous—constituting a social crisis because young white men remained unmoored from domestic and family life.²⁴ The subsequent decline of hobo communities in the early twentieth century—and the employment of Mexican-American migrant labor in places far from the border—solved one crisis (of domesticity) by substituting it for another (the racialization of the itinerant working class).

Prior work has largely attributed the unique hobo migratory pattern to their position in a transitional era, when the railway boom prompted a huge demand for manual labor far

¹⁹ DePastino, *Citizen Hobo*, p. 83.

²⁰ Hobo jungles lacked a color line, and overwhelmingly egalitarian and democratic. See Anderson, *On Hobos and Homelessness*, pp. 44-5.

²¹ Higbie, *Indispensable Outcasts*, p. 111.

²² Anderson, p. 83, notes that states along trunk lines were wildly overrepresented in hobo camps. The parallel lives of itinerant women are briefly explored in Chapter Three.

²³ Higbie, *Indispensable Outcasts*, pp. 105-27.

²⁴ DePastino, pp. 83-91.

from the settled core of the United States, in what Carlos Schwantes has termed the “wageworkers’ frontier.”²⁵ These interpretations are, in large part, correct. But where the environment has been noted in histories of hobos before, it is mostly through the seasonal nature of their work; environments are flattened into mere work schedules. In other words, this views environment as something static and separate from humans—a thing to be planned around and exploited. A more dynamic reading of environment shows that climate drove a requirement for not just seasonal but ad hoc labor, flexible enough to meet unpredictable labor demands; that this was unique to climatologically unstable regions; that fossil energy could not initially substitute for labor (as steam engines could not replace human hands), but technological advances in the twentieth century meant that it could. In other words, by incorporating this environmental lens into hobo histories, the rise and fall of the hobo regime is less foreordained, less naturalized, and more legible.

Hobos circulated widely—often to East Coast factories, or globally working on steamships or in the military—but the bulk of their work lay in the unpredictable landscapes of the American West.²⁶ This stark region has long been notorious for its aridity and variability—alternately an Eden and a graveyard for agricultural civilizations.²⁷ The product

²⁵ Schwantes, *Hard Traveling*, pp. 1-46; the term itself is defined p. 19; see also Wyman, *Hoboes*, p. 33.

²⁶ For an example of the wide circulation of hobo labor, see Higbie, *Indispensable Outcasts*, pp. 17-21.

²⁷ Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (New York: Oxford University Press, 1979); Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (New York: Harper and Row, 1980); Richard White, *The Roots of Dependency: Subsistence, Environment, and Social Change Among the Choctaws, Pawnees, and Navajos* (Lincoln, Nebraska: University of Nebraska Press, 1983); Patricia Nelson Limerick, *The Legacy of Conquest: The Unbroken Past of the American West* (New York: W. W. Norton & Co., 1987); William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton & Co., 1991). Worster's *Dust Bowl* in particular argues that capitalist agriculture had cataclysmic outcomes in the West due to its climate, and Cronon's *Nature's Metropolis* instead explores the complete remaking of the West by capitalist expansion. This work was only part of a longer historiography: Wallace Stegner, *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West* (New York: Penguin, 1992 (orig. 1954)); Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York: Penguin, 1986); John Opie, *Ogalalla: Water for a Dry Land* (Lincoln, Nebraska: University of Nebraska Press, 2000 (orig. 1993)); Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York:

of violence, shaped in every way by its long legacies of settler colonial conquest, the modern West exemplifies the enormous human and non-human costs of an extraction-based resource economy.²⁸ More recent scholarship has shown the ways intertwined extraction and dispossession continued long past the “Indian Wars,” making settler colonialism very much a present-tense phenomenon—and making the West a template for global capitalist frontiers and American empire.²⁹ But where American agriculture throughout the empire relied on migrant populations, the relative predictability of its East and West coast climates—not to mention those of the humid subtropical South or tropical island possessions—made arranging transnational labor forces viable.³⁰ The comparative instability of the Great Plains instead forced employers to rely on American nationals—creating a situation of intense climate precarity.

Oxford University Press, 1985); Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* (Seattle: University of Washington Press, 1999).

²⁸ Limerick, *The Legacy of Conquest*. Thomas Andrews, *Killing for Coal: America's Deadliest Labor War* (Cambridge, Massachusetts: Harvard University Press, 2008); Timothy LeCain, *Mass Destruction: The Men and Giant Mines that Wired America and Scarred the Planet* (New Brunswick, New Jersey: Rutgers UP, 2009). See also Connie Chiang, *Nature Behind Barbed Wire: An Environmental History of the Japanese American Incarceration* (New York: Oxford University Press, 2018).

²⁹ For the long history of settler colonialism in the American West and its position as the testing ground for empire, see Megan Black, *The Global Interior: Mineral Frontiers and American Power* (Cambridge, Massachusetts: Harvard University Press, 2018); Joshua Specht, *Red Meat Republic: The Rise of the Cattle-Beef Complex, 1865-1906* (Cambridge, Massachusetts: Harvard UP, 2019); Andrew Needham, *Power Lines: Phoenix and the Making of the Modern Southwest* (Princeton, New Jersey: Princeton University Press, 2016); Elliott West, *The Contested Plains: Indians, Goldseekers, and the Rush to Colorado* (Lawrence, Kansas: University Press of Kansas, 1998); and Anne Hyde, *Empires, Nations, and Families: A New History of the North American West, 1800-1860* (Lincoln, Nebraska: University of Nebraska Press, 2011). See also studies of settler colonialism and the West: Roxanne Dunbar-Ortiz, *An Indigenous Peoples' History of the United States* (Boston: Beacon Press, 2014); David Treuer, *The Heartbeat of Wounded Knee: Native America from 1890 to the Present* (New York: Penguin Random House, 2019); Eve Tuck and K. Wayne Yang, “Decolonization Is Not a Metaphor,” *Decolonization: Indigeneity, Education & Society* 1, no. 1 (2012); Melissa Meyer, *The White Earth Tragedy: Ethnicity and Dispossession at a Minnesota Anishinaabe Reservation, 1889-1920* (Lincoln, Nebraska: University of Nebraska Press, 1994); Martha Sandweiss, *Print the Legend: Photography and the American West* (New Haven, Connecticut: Yale University Press, 2002); Richard Slotkin, *The Fatal Environment* (New York: HarperCollins, 1994, orig. 1985); Kristin Hoganson, *Fighting for American Manhood: How Gender Politics Provoked the Spanish-American and Philippine-American Wars* (New Haven, Connecticut: Yale University Press, 1998).

³⁰ On the extreme nature of Great Plains weather, see Kenneth Dewey, *Great Plains Weather* (Lincoln: Bison Books, 2019), pp. 1-27.

Hobos therefore serve as a useful case study for climate and energy history in the Anthropocene.³¹ The increasing urgency of the climate crisis has renewed interest in these topics. Climate historians have shown that the effects of prior climatic catastrophe have been enough to significantly alter the futures of societies (for good or bad), this despite the fact that natural climatic variability has been far less substantial than the projected outcomes of anthropogenic climate change in the twenty-first century.³² Work on extreme climates, like that of Bathsheba Demuth’s study of energy and climate in Beringia, meanwhile, show that the histories of marginal environments can illuminate both the limits and priorities of political systems.³³ In the hobo West, stark climatic extremes lend clarity to the relationships between labor and energy systems. Energy historians, meanwhile, have documented the surging fossil fuel use of the last two centuries that has generated the climate crisis to begin with—and shown that the incredible advances in human well-being across the last two centuries are owed primarily to this towering edifice.³⁴ Energy systems, they show, are

³¹ The Anthropocene is defined as the period in which humans have become a geological agent—affecting the planet’s atmosphere, hydrology, and biosphere on a scale that will be recognizable for millions of years. The most well-known of these effects, of course, is anthropogenic climate change caused by fossil fuel CO₂ emissions.

³² Dagomar DeGroot, *The Frigid Golden Age: Climate Change, The Little Ice Age, and the Dutch Republic, 1560-1720* (New York: Cambridge University Press, 2018); Kyle Harper, *The Fate of Rome: Climate, Disease, and the End of an Empire* (Princeton, New Jersey: Princeton University Press, 2017); John Brooke, *Climate Change and the Course of Global History* (Cambridge, England: University of Cambridge Press, 2014); Diana K. Davis, *The Arid Lands: History, Power, Knowledge* (Cambridge, Massachusetts: Massachusetts Institute of Technology Press, 2016). Dagomar Degroot, Kevin Anchukaitis, Martin Bauch, Jakob Burnham, Fred Carnegy, Jianxin Cui, Kathryn de Luna, Piotr Guzowski, George Hambrecht, Heli Huhtamaa, Adam Izdebski, Katrin Kleemann, Emma Moesswilde, Naresh Neupane, Timothy Newfield, Qing Pei, Elena Xoplaki, Natale Zappia, “Towards a rigorous understanding of societal responses to climate change,” *Nature* 591, no. 7851 (March 2021).

³³ Bathsheba Demuth, *The Frozen Coast: An Environmental History of the Bering Strait* (New York: W. W. Norton, 2019).

³⁴ Vaclav Smil, *Energy and Civilization: A History* (Cambridge, Massachusetts: Massachusetts Institute of Technology Press, 2017); Astrid Kander, Paolo Malanima, and Paul Warde, *Power to the People: Energy in Europe Over the Last Five Centuries* (Princeton, New Jersey: Princeton University Press, 2013); E. A. Wrigley, *The Path to Sustained Growth: England’s Transition from an Organic Economy to an Industrial Revolution* (New York: Cambridge University Press, 2016); David Nye, *Consuming Power: A Social History of American Energies*, (Cambridge, Massachusetts: Massachusetts Institute of Technology Press, 1998).

layered and path-dependent—meaning that innocuous choices made early on are built into pieces of physical infrastructure that then curtail or encourage later development.³⁵ Nevertheless, the social mechanisms for broad energy transitions remain poorly theorized.³⁶ Timothy Mitchell has notably tried to link energy and labor, arguing that coal miners have far more leverage in the workplace, in contrast to that of oil laborers—thus, he contends, oil-dependent capitalist states are less easily held hostage by labor demands, and consequently less democratic.³⁷ But this dissertation builds more on recent work showing that coal use intensified, rather than substituted for, manual labor.³⁸ In the American West—and, I suggest, more widely—transitions in how workplaces *used* energy engendered labor transitions in turn.

Ultimately, the rise of the hobo reflected a particular period in the expansion of capitalism across the globe. In the nineteenth century, increasingly powerful states incorporated vast territories into the world market economy as commodity frontiers—eradicating or reengineering the ecologies and populations of entire regions for the enrichment of a distant, tiny elite class.³⁹ In the narrow time between 1840 and 1900, workers transformed verdant grasslands biomes in Russia, South Africa, Argentina, Australia, and the Western United States into million-acre stretches of wheat grasses and

³⁵ Christopher Jones, *Routes of Power: Energy and Modern America* (Cambridge, Massachusetts: Harvard University Press, 2014); see also Kander, et al., *Power to the People*.

³⁶ See the critique in DeGroot et al., “Towards a rigorous understanding of societal responses to climate change.”

³⁷ Timothy Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (New York: Verso Press, 2011).

³⁸ On Barak, *Powering Empire: How Coal Made the Middle East and Sparked Global Carbonization* (Oakland: University of California Press, 2020); Victor Seow, *Carbon Technocracy: Energy Regimes in Modern East Asia* (Chicago: University of Chicago Press, forthcoming (2022)).

³⁹ Cronon, *Nature's Metropolis*; James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Angloworld* (New York: Oxford University Press, 2009); Sven Beckert, *Empire of Cotton: A Global History* (New York: PenguinRandom House, 2014); Jason Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital* (New York: Verso Press, 2015).

beef cattle; they removed unprecedented quantities of metal ores from mines as widely separated as Montana and Antofagasta; and they cut virtually all the old-growth timber in the continental United States.⁴⁰ In the United States, these transformations coincided with sweeping changes in agricultural practice and the relationship of the countryside to the city.⁴¹ But they also parallel steady shifts in the American labor economy away from paternalistic and unfree labor arrangements (both free and unfree) into a wide array of contract wage labor systems.⁴²

However, where classic labor histories of labor in this period focus on urban workers, often skilled craftspeople, this dissertation focuses instead on the common manual laborer without a trade—a group Peter Way argues is far more representative of the overall labor

⁴⁰ See Belich, *Replenishing the Earth*; David Moon, *The American Steppes: The Unexpected Russian Roots of Great Plains Agriculture, 1870s–1930s* (Cambridge, England: Cambridge University Press, 2020); Jeremy Adelman, *Frontier Development: Land, Labour and Capital on the Wheatlands of Argentina and Canada, 1890-1914* (New York: Clarendon Press, 1994); James Scobie, *Revolution on the Pampas; a Social History of Argentine Wheat, 1860-1910*, (Austin: University of Texas Press, 1964). See also Jonathan Levy, *Ages of American Capitalism: A History of the United States* (New York: Random House, 2021), pp. 249-57.

⁴¹ Cronon, *Nature's Metropolis*; Worster, *Dust Bowl*; Fiege, *Irrigated Eden*; Elizabeth Sanders, *Roots of Reform: Farmers, Workers, and the American State, 1877-1917* (Chicago: University of Chicago Press, 1999); Jeremy Atack and Fred Bateman, *To Their Own Soil: Agriculture in the Antebellum North* (Ames, Iowa: Iowa State University Press, 1987); Richard White, *Railroaded*; Allan Bogue, *From Prairie to Corn Belt: Farming on the Illinois and Iowa Prairies in the Nineteenth Century* (Chicago: University of Chicago Press, 1963); Donald Winters, *Farmers without Farms: Agricultural Tenancy in Nineteenth-Century Iowa* (Westport, Connecticut: Greenwood Press, 1978); for the antebellum roots of this transformation: Emily Pawley, *The Nature of the Future: Agriculture, Science, and Capitalism in the Antebellum North* (Chicago: University of Chicago Press, 2020); Ariel Ron, *Grassroots Leviathan: Agricultural Reform and the Rural North in the Slaveholding Republic* (Baltimore: Johns Hopkins University Press, 2020); Steven Stoll, *Larding the Lean Earth: Soil and Society in Nineteenth-Century America* (New York: Hill and Wang, 2002); Alan Olmstead and Paul Rhode, *Creating Abundance: Biological Innovation and American Agricultural Development* (Chapel Hill, North Carolina: University of North Carolina Press, 2008).

⁴² On wage labor systems, see: Stanley, *From Bondage to Contract*; Daniel Rodgers, *The Work Ethic in Industrial America, 1850-1920* (Chicago: University of Chicago Press, 1974); David Montgomery, *The Fall of the House of Labor: The Workplace, the State, and American Labor Activism, 1865-1925* (New York: Cambridge University Press, 1987); E. P. Thompson, "Time, Work-Discipline, and Industrial Capitalism," *Past and Present*, no. 38 (December 1967); on unfree labor: Edward Baptist, *The Half Has Never Been Told: Slavery and the Making of American Capitalism* (New York: Basic Books, 2016); Walter Johnson, *River of Dark Dreams: Slavery and Empire in the Cotton Kingdom* (Cambridge, Massachusetts: Harvard UP, 2013).

experience of the transition to capitalism.⁴³ Moreover, in focusing on the inconsistent, scattered odd jobs of the hinterland, hobo work is more representative of a majority-rural nation—and highlights the connections between city and country.⁴⁴ In the periphery, though many workers were not as perpetually on the move as hobos, most workers rested on the same knife's edge of precarity. In short, paralleling the unprecedented circulation of capital was an unprecedented disruption of the work and lives of people. Capitalism only had the power to remake the globe through the physical labor of millions of hands.

On the other hand, this history makes clear that migrant work was a very specific stopgap climate mitigation system. It rose not because anyone designed it—indeed, for employer and employee alike, the system brought constant headaches and challenges—but rather as an emergent property of the region's underlying ecological and economic processes. In the era of steam- and coal- industrialization, physical *work* in commodity frontiers was, almost universally, done by human and animal bodies. Steam engines, in this system, provided enormous power at the cost of portability; horses and their ilk performed the mobile, heavy labor that could be offloaded to non-human intelligences. Humans mostly performed labor that required something beyond pure power: intellect or the precision, adaptability, and dexterity of hands. But this period of energy history—plenty of energy (steam) but only clumsy transformations of energy into work—ended relatively quickly. By

⁴³ Peter Way, *Common Labor: Workers and the Digging of North American Canals, 1780-1860* (Baltimore: Johns Hopkins University Press, 1993). See also histories which focus on other common labor, like Seth Rockman, *Scraping By: Wage Labor, Slavery, and Survival in Early Baltimore* (Baltimore: Johns Hopkins University Press, 2009); Christine Stansell, *City of Women: Sex and Class, 1789-1860* (Urbana, Illinois: University of Illinois Press, 1986); Jeanne Boydston, *Home and Work: Housework, Wages, and the Ideology of Labor in the Early Republic* (New York: Oxford University Press, 1990).

⁴⁴ United States Census Bureau, “United States Summary: 2010,” 2012, <https://www.census.gov/prod/cen2010/cph-2-1.pdf>, p. 20; in 1910, 54.4% of the U.S. population was still rural.

the mid-twentieth century, cheap petroleum-powered internal combustion engines meant dozens of tasks that had required humans could suddenly be machine-augmented. Energy was not only cheap enough to heat, but portable enough to work. As a consequence, capitalist society discarded the migrant worker in these climatically unstable regions except in a few specific industries—dairying, fruit and root crops, and so on—tasks for which they relied increasingly on Mexican-American migrant laborers. The climate mitigation once performed by migrant hands was given over to more reliable fossil fuels.

*** **

Surviving capitalism is a matter of living, like weeds, in its cracks. Few places in the world have been as utterly reshaped by the all-consuming inferno of capitalism as the Great Plains. Once, this land was covered in swathes of prairie, thick with grasses, wildflowers, and shrubs taller than the humans who wandered them. Since the American conquest, from the Ohio to the Missouri, these ancient denizens have been systematically rooted out and destroyed, replaced by wheat, corn, and soybeans. They are rogues and renegades; when they make their way into a wheat field, they gnaw at its profit margins. But you can still find thin slivers of survival between these grain fields, places where it is not valuable enough to cultivate or police: along the windbreaks, fences, and roads. Here, old prairie plants still survive. Here, capitalism cracks.

American capitalism is just as unkind to people out of place. Settler colonialism undergirds capitalism in this country, centered around the idea that all land “belongs” to someone, and that unwanted “trespassers” on those lands (often coded by race) are acceptable targets for legal or extralegal violence. Increasingly rare are the places where one need not pay to exist. But there are in between places where humans can live outside the

norms the power structures of the United States have dictated—places which even a fully functioning capitalist society has little use for except as negative space. Economically, socially, and ecologically, capitalism cracks—often cracking in all three ways in the same places. Out West, in between the rows of corn, under hedges, and by the railroad: these places where unwanted plants survived, unwanted people survived as well. It is these people who are our subjects.

It is useful, before going any further, to define capitalism and its place in this story. “Capitalism is an economy—an instrumental means of producing things for consumption—geared toward the achievement of capital’s end, which is pecuniary gain.”⁴⁵ “Capital,” in this definition, is a legal asset valued for its prospective future yield, be it a stock, machine, land, or something else; “capitalists” are wealthy persons who invest their capital in enterprises they hope will increase their own wealth.⁴⁶ In the time and place we are concerned with—the Great Plains, between about 1870 and 1940—capital most prominently took the form of land, violently expropriated from indigenous nations in blatant treaty violations that the settler state then upheld.⁴⁷ Settlers, railroad companies, and governments both state and federal expected this land to yield massive returns, whether through crop production—exploiting what I describe as a settler colonial bounty of stored biomass and energy from indigenous cultivation—subterranean natural resources like ores and oil, or through the mortgages farming families would pay in exchange for the status of landowning in nineteenth and twentieth century America.⁴⁸ Considerable public and private investment

⁴⁵ Levy, *Ages of American Capitalism*, p. xx.

⁴⁶ Levy, *Ages of American Capitalism*, pp. xiii-xxvi.

⁴⁷ Levy, *Ages of American Capitalism*, pp. 249-57, Limerick, *Legacy of Conquest*, pp. 55-77; Karuka, *Tracks of Empire*.

⁴⁸ Jonathan Levy, *Freaks of Fortune: The Emerging World of Capitalism and Risk in America* (Cambridge, Massachusetts: Harvard University Press, 2012); White, *Railroaded*.

went into these lands—surveying, building railroad lines, the ethnic cleansing of prior inhabitants—all with the expectation of profit.⁴⁹ However, climatic instability made the eventual gains uncertain and inconsistent. Here, the ecological role of hobos intersects with the longer history of American capitalism—by offloading the inherent risk of the asset that was Great Plains land (climatological instability) onto laborers, capitalist society could mitigate the effects of the region’s long droughts.

Small farmers, lumber corporations, and mining firms all had narrow windows in which they could extract value from the land, with varying degrees of risk—risk ultimately borne by precarious labor. For farmers, this risk was both extreme and existential. The commodity they produced for capital markets (wheat) depended on a climate entirely outside of their control—indeed, a climate they could not even predict.⁵⁰ The one part of the process that could be controlled was that of labor—its costs, its contracts, and its tenure. Given precarious laborers who would accept them, farmers offered short term contracts with absolutely no guarantees. Even small operations, moreover, were not just capitalist, but industrial: automating, mechanizing, and segmenting labor.⁵¹ This turned a high-risk operation into a more manageable one—in the worst years, seed might be lost, but labor could be cut. The creation of surplus value in this region, in other words, required shunting environmental risks as much as possible onto the workforce.

Historians of the nineteenth century may be surprised to find few mentions of unions or strikes in this work. Migrant workers rarely found recourse in labor organization (the

⁴⁹ Specht, *Red Meat Republic*, pp. 106-115.

⁵⁰ Jamie Pietruska, *Looking Forward: Prediction and Uncertainty in Modern America* (Chicago: University of Chicago Press, 2017), pp. 71-108.

⁵¹ This unusual juxtaposition of “traditional” work and industrial workplace was common in the West; see Iglar, *Industrial Cowboys*.

Industrial Workers of the World being the most notable exception). There were few strikes that genuinely threatened the industries in which hobos worked; no devastating Supreme Court verdict that crushed labor at the last second—a hobo had essentially no legal standing. Rather, this dissertation draws far more heavily on methods from labor histories that center the everyday construction of labor relations—centering the actual physical activities laborers pursued, and the quasi-legal production of social relations in which the employee was a social outcast.⁵² But hobos’ histories are no less powerful for this focus on the everyday. Ultimately, they illustrate how the capitalist reshaping of Western ecologies was built through the efforts of physical human labor—and how that same capitalism profoundly exploited and destroyed human lives. More simply, this story puts individual human lives into existing histories of massive ecological change.

This pursuit requires looking at old sources with fresh eyes, alongside some new sources. Migrants told their stories sparingly, but two collections of narratives make up the backbone of this project. Nels Anderson, a hobo who went on to become a sociology PhD at the University of Chicago, collected hundreds of interviews on the road, and the case file notes that survive paint a fascinating portrait of hobo communities. Similar case files were created by government employees working for the U.S. Commission on Industrial Relations, whose interviews with dozens of migrant laborers on the road are preserved on microfilm. These are supplemented by various hobo autobiographies, descriptions of industrial work, and occasional notes, diaries, and letters from employers, social reformers, and government officials, along with tens of thousands of newspaper entries from over a hundred different

⁵² See especially Rockman, *Scraping By*; Montgomery, *Fall of the House of Labor*, pp. 58-111; and Way, *Common Labor*.

towns to track the geography and temporality of hobo work. But records of ecological change—scientific studies of precipitation, pollen counts, and fertilizer and energy use—ought to radically reshape how we understand these workers.

Integrating these approaches requires us to parse human and nonhuman interactions, beyond the question of whether humans primarily shape their environment or are shaped by it.⁵³ This dissertation draws instead on scholars that understand eco-cultural relationships and networks as mutually constructed by multiple groups of agents—human, nonhuman, and nonliving—together producing dynamic environments through feedback loops, emergent properties, and entanglements.⁵⁴ By situating hobos in *dynamic* precarious ecologies—ones in which humans were as much the influencers as the influenced—I hope it is clear that their precarity was hardly an inevitable outcome of aridity, but rather that environments entrench, reproduce, and magnify the political choices of societies (in this case, capitalism).⁵⁵ Yet without the ecologies into which they rode, or the technologies which shaped them, hobos might have simply remained indistinguishable from the working poor of the rest of the nineteenth century, occasionally drawn into the hinterland by prospects of higher wages but largely remaining integrated with their urban counterparts. With these ecologies and technologies, they became a permanent class of itinerant, transcontinental poor. An integrated approach reveals a group of migrants who simultaneously suffered from some of the worst exploitation industrial capitalism had to offer, yet, seemingly in

⁵³ This debate, most famously, took place between William Cronon and Donald Worster.

⁵⁴ Three of the most influential texts on this line of thinking for me are Timothy LeCain, *The Matter of History: How Things Create the Past* (New York: Cambridge UP, 2017); Anna Lowenhaupt Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton, New Jersey: Princeton University Press, 2015), and Eric Swyngedouw, “Modernity and Hybridity: Nature, Regeneracionismo, and the Production of the Spanish Waterscape, 1890-1930,” *Annals of the Association of American Geographers* 89 (1999), pp. 443-465.

⁵⁵ This is of course, directly contra Worster, who argues that the Western environment fundamentally determined which systems of work would function in it; see Donald Worster, *Rivers of Empire*.

contradiction, leveraged their environmental position to elude law enforcement and to create some of the most radical spaces in the country.

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This dissertation is split into four chapters. Chapter One explores the simultaneous expansion of the United States into the American West, the rise of steam power, and the emergence of hobos. It defines the theory of “work regimes,” in which human and nonhuman forces constrain how workers operate in an economy. In this period, the American economy constantly grew, fueled by settler colonial bounties of soil and energy, but this growth required increasing muscle power. In the American West, that was unsustainable—the climate’s instability made these requirements extremely unpredictable. Ultimately, the solution was migrant labor, made temporary by ecology, mobile by technology, and precarious by law and economy. The chapter leans heavily on quantitative evidence about the American energy economy as a whole, and extensive qualitative evidence about the legal and economic systems hobos navigated—a regime of coal, hobos, and dirt.

Chapter Two roots these trends in the specific example of the wheat industry, showing that the constant threat of drought forced hobos hoping to make money as harvest hands to hover in precarity for days or weeks at a time. In it, I compile data from hundreds of state newspapers in Kansas, Nebraska, and North and South Dakota to show how harvest hand employment not only varied with the climate, but how climatic instability often only became apparent as harvest hands already arrived in the state. This made it virtually impossible to plan ahead for labor, as the demand for harvest hands could vary dramatically even from year to year. Though government and union action pointed the way to possible

alternative systems, they all entailed too many sacrifices on the part of one actor or another, so the hobo system—which no one particularly liked—ended up persisting.

Chapter Three follows hobos back to their winter haunts in cities, arguing that climate and ecology both drove the seasonal migration to cities and played a role in their radical politics. It delves into hobo stories of companionship, into the ways they organized self-government in jungles and other temporary migrant camps, into traveling around cities, and into the politics they wrote about and practiced. Drawing on evidence of the built environment, nonhuman environments, and the challenges hobos faced and solutions they devised, I show that hobos' relationship to space fundamentally radicalized them—it exposed them to and forced them to practice anti-capitalist ideologies.

Finally, Chapter Four concludes the study by connecting the rise of oil and the decline of the hobo, and links these developments to a broader labor transition paralleling the energy transition of the 1920s. Effectively, the adoption of oil simultaneously undermined hobo survival strategies and made seasonal labor more predictable for farmers. When farmers sought new laborers for new crops, they turned now to Mexican migrant workers—who were cheaper, but required planning far in advance. It was the sort of arrangement that would not have been possible in the age of steam and wheat—oil made it possible to move beyond ad hoc and temporary contracts. The result was a new work regime—one of oil, Mexicans, and fertilizers—and in which climatic risk was mitigated by fossil fuels.

Chapter One

The First Western Work Regime

Hobos, Steam, and Dirt

Catching a train can be a stressful experience; boarding one illegally at speed, on the other hand, elicits a certain additional terror. So it was for a teenaged Nels Anderson, crouched in the bushes by the railroad line, watching the passing trains somewhere near Galesburg, Illinois in the early 1900s. Anderson knew the dangers of this art—keenly. A railroad cop had threatened to beat him just for walking by the tracks mere hours before. Having only five dollars to his name, a few sandwiches he'd begged from the houses along the way, and a vague intention of working the harvest fields of Kansas, every move brought the risk of a thrashing or maiming.¹

His luck had turned, though. "I saw a man waiting in the brush. He too was going west," Anderson recalled in his autobiography, years later. "He told me that the freights leaving the yards had an uphill pull and were able to gather speed only along that stretch of straight track."² The hill slowed the trains just enough that if they timed it perfectly, the men could sprint alongside the boxcars and jump aboard. If they made it, they could hide inside the car; if they stumbled, they risked losing a limb—or worse. Together, the two men waited for a shift change, and finally, late in the evening, saw an unguarded train. The chase began. "The man next me grabbed on a boxcar and climbed to the deck. There was time only for

¹ This anecdote is taken from Nels Anderson, *The American Hobo: An Autobiography* (Leiden, Netherlands: E. J. Brill, 1975), pp. 91-3.

² Anderson, *The American Hobo*, p. 92.

glances. Many men were running out of the brush to climb aboard”—maybe forty in all.³ And when he finally leapt onto the train, finding several new companions, he learned that, though they were all going west to the harvest, none of them knew whether the train was even going West in the first place. It was a “gamble that had to be taken.”⁴

This drama of trying to catch a train guarded by railroad security and municipal police, and the sheer physical danger of falling onto the track was hardly uncommon. Almost every year between the mid-1870s and the mid-1920s, somewhere between eighty thousand and a hundred thousand men rode the rails westward from the cities of the Midwest, planning to work the harvests of the grain fields of the Great Plains, all the way from Kansas to the Canadian prairie.⁵ They were the core of an even larger group of migrants beating their way to a workers’ frontier. These “hobos” were America’s prototypical migrant workers—their patterns of work and migration laid the foundations for those who would come after them. But they were exclusively a product of the age of steam. This chapter details the rise of the hobos and why that age produced them.

In it, I argue that hobos solved an ecological problem for settlers of the western grasslands: climatic variability. Settlers in the prairies and plains had conquered a bounty of free energy and biomass, won by genocide and settler colonialism. This bounty fueled the unprecedented expansion of the American economy. But it also made them extremely vulnerable to the natural cycles of the grasslands climate, which routinely suffered years- or decades-long droughts. These droughts resulted in devastating harvest losses of up to half

³ Anderson, *The American Hobo*, p. 92.

⁴ Anderson, *The American Hobo*, p. 92.

⁵ Mark Wyman, *Hoboes: Bindlestiffs, Fruit Tramps, and the Harvesting of the West* (New York: Hill and Wang, 2010), p. 30.

the annual crop. Traditional harvest labor could not handle this kind of variability. Instead, over the course of the 1870s and 1880s, rural communities imported tens of thousands of ad hoc, itinerant laborers. Though these communities attempted to regulate these workers tightly, hobos circumvented their control using the technology of the steam age. In short, climate and ecology created the need for *some* kind of migrant worker; technological, social, and penal systems shaped that migrant into the hobo—a worker who constantly dodged police and lived in camps on the margins of communities. This collection of systems governing how this work was done, what I call a “work regime,” remained in place until the 1920s.

My analysis draws on historiographies spanning environmental, labor, and colonial histories. “Work” here refers not just to human labor, but rather to the physical process of work, the expenditure of energy in performing tasks. Most closely drawing on Richard White’s *Organic Machine*, I see some types of human work as interchangeable with that done by animals, mechanical engines, or objects we normally consider inanimate, like rivers or wind.⁶ Indeed, the hobo’s work would eventually be replaced by nonhuman means. It is one of the purposes of this chapter to identify precisely what kinds of work could, in the context of this era, only be performed by human laborers. Cultural historians, like Margot Canady and Kelly Lytle Hernández, have meanwhile explored how the hobo ran afoul of budding American legal and carceral regimes.⁷ Perhaps most profoundly, this work is influenced by writers who have explored the history of this region through settler colonialism, from Manu

⁶ Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1996).

⁷ Margot Canady, *The Straight State: Sexuality and Citizenship in Twentieth Century America* (Princeton, New Jersey: Princeton University Press, 2011); Kelly Lytle Hernández, *City of Inmates: Conquest, Rebellion, and the Rise of Human Caging in Los Angeles, 1771–1965* (Chapel Hill, North Carolina: University of North Carolina Press, 2017).

Karuka and Nick Estes to Eve Tuck and K. W. Yang. American expansion was inextricable from settler colonialism, a process that required not just the settler, but a steady supply of cheap, easily coerced labor—here, hobos—and the expropriation of native wealth and lands.⁸ Lastly, of course, this chapter draws on the excellent histories of hobo work that have already been written.⁹ By reexamining hobos through these new interpretive frameworks, this history shows the profound influence of the environment on hobo work.

The settlement of the West and its industrialization are sometimes read as the triumph of capitalism—a story in which the hobo plays the part of a mobile proletariat. Through economies of scale, humans shaped Western ecologies in ways that muted natural variability.¹⁰ This chapter tells a different story. The political economy of the West may have shielded consumers and capitalists from environmental uncertainty, but only by pushing the costs of that natural variability onto the workforce of hobos. In good years, the life of a hobo could be downright appealing; in bad, it could be nothing short of fatal. Rather than escaping the climate, capitalists had simply hidden their costs by pushing them onto a marginalized population.

This chapter begins by exploring the crisis that gave rise to the hobo—a climatic crisis that spanned nearly a decade around the middle of the 19th century, one that manifested in

⁸ Eve Tuck and K. Wayne Yang, “Decolonization Is Not a Metaphor,” *Decolonization: Indigeneity, Education & Society* 1, no. 1 (2012); Manu Karuka, *Empire’s Tracks: Indigenous Nations, Chinese Workers, and the Transcontinental Railroad* (Oakland, California: University of California Press, 2019); Nick Estes, *Our History Is the Future: Standing Rock Versus the Dakota Access Pipeline, and the Long Tradition of Indigenous Resistance* (New York: Verso Press, 2019).

⁹ Frank Higbie, *Indispensable Outcasts: Hobo Workers and Community in the American Midwest, 1880-1930* (Urbana, Illinois: University of Illinois Press, 2003); Mark Wyman, *Hoboes: Bindlestiffs, Fruit Tramps, and the Harvesting of the West* (New York: Macmillan, 2010); Cindy Hahamovitch, *The Fruits of Their Labor: Atlantic Coast Farmworkers and the Making of Migrant Poverty, 1870-1945* (Chapel Hill, North Carolina: University of North Carolina Press, 2010), pp. 14-38; Carlos Schwantes, *Hard Traveling: A Portrait of Work Life in the New Northwest* (Lincoln, Nebraska: University of Nebraska Press, 1994).

¹⁰ William Cronon, *Nature’s Metropolis: Chicago and the Great West* (New York: W. W. Norton & Co., 1991); Wyman, *Hoboes*.

several different spheres but most profoundly by interrupting agricultural work. It then explores why the midcentury American energy economy, showing why it was so vulnerable to such a crisis. The remainder of the chapter details the creation and operation of the first western work regime, the overlapping systems of ecology, society, and penal operations that governed the lives of the American hobo.

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Limits to Empire

To understand the rise of the hobo, we must first understand that the midcentury American West was a place in crisis. That crisis took political, economic, and social forms: the 1850s and 60s were the time of Bleeding Kansas, the Civil War, and the Dakota War. But as I will show here, this was more fundamentally an *environmental* crisis. The systems on which the state had relied to make food and wealth, to transform one kind of thing into another, had failed. Though settlers widely recognized the crisis at the time and explored many of its facets, they only incompletely understood the connections between them.

The first and most obvious of their anxieties—from the outset—was the lack of water. Even as white Americans seized the prairies and Plains from indigenous nations across the mid-nineteenth century, they fretted over the “Great American Desert” they conquered.¹¹ Average rainfall in what would eventually become the continental United States fell off the farther west one ranged. Somewhere around the 98th or 99th parallel, it dipped below 20 inches of rain in a year—the minimum amount that a wheat plant needed to bear grain at

¹¹ Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York: Penguin, 1986), pp. 15-51; Donald Worster, *An Unsettled Country: Changing Landscapes of the American West* (Albuquerque: University of New Mexico Press, 1994), pp. 1-30; Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford UP, 1985), pp. 68-70.

harvest time, and therefore the limit of commercially viable agriculture.¹² Though settlers mostly stopped terming the land a “desert” by the 1870s and many succeeded in cultivating the soil, their anxiety never really left. To them, agricultural losses were only part of the problem.

Nineteenth century Europeans and Americans did not think of climate as a completely external force the way most of us do today. Rather than purely geophysical variables—the amount of sunlight a patch of land gets, the amount of moisture, its weather, averaged over the course of many years—“climate” instead encompassed many different aspects of a landscape, each of them interconnected.¹³ Chief among these factors were forest cover and cultivation, each of which was believed to moderate the climate into a pleasant and livable condition. These factors were in turn connected with human health. The prevalence of tuberculosis and other maladies were supposed to decline in well-cultivated areas, whereas poorly drained swamplands, cities, and wilderness were each seen as problem areas.¹⁴ All of these factors fed into racial anxiety as well; Americans believed white and black people were suited to particular climates, and that ranging outside them seemed to be fairly dangerous.¹⁵ Each of these variables played a role in perceptions of the grasslands crisis of the late 1850s.

Early Kansas boosters (advertisers) were eager to anoint their land as a literal “Eden.”¹⁶ “It has been thought by some, and probably is now,” a typical advertisement ran,

¹² Wallace Stegner, *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West* (New York: Penguin, 1992 (orig. 1954)).

¹³ Conevery Valencius, *The Health of the Country: How American Settlers Understood Themselves and Their Land*, (New York: Basic Books, 2002); Anya Zilberstein, *A Temperate Empire: Making Climate Change in Early America*, (New York: Oxford University Press, 2016).

¹⁴ Valencius, *The Health of the Country*.

¹⁵ Zilberstein, *A Temperate Empire*, pp. 118-147.

¹⁶ For more on the influence of boosters on the settlement of the American West, see Cronon, *Nature's Metropolis*, pp. 23-54.

“that the remainder of the lands in Kansas are but desert plains... south and west towards the Cordilleras and Rocky Mountains, and fit only for a hunting ground for the savages or a race course for the roving horde of the buffalo. But this is certainly a mistaken idea.” The same advertisers noted that “disease of the lungs and liver... which generally terminate in consumption [tuberculosis] and premature death, are unknown... while on the other hand the various fevers to which the more extreme portion of the south are liable are seldom, if ever, known.”¹⁷ Above all, there was the soil—dozens of feet thick, unbelievably rich, and what one booster called “the *ne plus ultra* of farming—an agriculture worthy of the name.”¹⁸

But there were serious warning signs to the mid-century eye: the utter lack of timber, “enough to lead many persons to suppose... that prairie farms would be of scarcely any value,” and the suspiciously frequent assurances—nearly once per advertisement—that drought conditions were exceptions rather than the rule.¹⁹ The foremost American scientist of the era, Joseph Henry, argued in 1856 that “a sober deduction from the facts which have accumulated during the last few years will show that we are nearer the confines of the healthy expansion of our agricultural operations... than those who have not paid careful attention to the subject could readily imagine.”²⁰ And the conflation of race and climate exacerbated the sectional tensions that enveloped Kansas just before the Civil War—partisans of both sides fretted that black slavery could not survive outside the heat of the

¹⁷ S. J. T., “For the Herald of Freedom, Deer Creek, Jun 5th, 1855,” *The Kansas Herald of Freedom*, Wakarusa, KS, 6/9/1855, p. 2.

¹⁸ C. W. Dana and Thomas C. Benton, *The Great West, or the Garden of the World; Its History, Its Wealth, Its Natural Advantages and Its Future*, Boston: Thayer and Eldridge, 1861, p. 14.

¹⁹ “To Persons in the East who intend Emigrating to the West,” *The Kansas News*, Topeka, KS, 2/6/1858, p. 3.

²⁰ Joseph Henry, “Meteorology in Its Connection with Agriculture (1856),” in *Scientific Writings of Joseph Henry, Volume 2*, Washington: Smithsonian Institution, 1886, p. 35.

South.²¹ The West, and especially its climate, seemed to be uncultivable with traditional labor forms; it seemed to be the limit of both free North and slave South.

These anxieties came to a head in the drought of the 1850s and 60s. Rainfall plummeted across the Great Plains, and farmers formed collective relief programs to desperately try to stave off food shortages.²² But things did not get better. Early in the drought, Kansas settlers struck notes of hope, writing, “That there has been one failure in four years argues nothing. The present season has been an unprecedented one; and of course the farmers were entirely unprepared for it.”²³ Another Kansan implored any “disheartened” countrymen not to flee the region, writing: “they have somehow or another obtained the mistaken idea that Kansas is unfortunate in her climate and in the constitution of the atmosphere which floats over her broad prairies, and that she will be subject to frequent periodic affliction such as that which has visited us during this season.”²⁴ These came in 1860, after the worst year of the drought. But it returned, as an editorial in 1862 would demonstrate—“Our climate is a very dry one; the fact is undeniable -- however we may account for it. We probably shall not often suffer from this cause as we did a year ago, the past summer.”²⁵ Virtually the same words would be written in 1864: “In the first place we should all bear in mind, that we are situated in a high and dry climate. [...] The people of Kansas have amply proven, within the last six or eight years, that this climate is very precarious and uncertain in regard to raising crops... there are few farmers in northern

²¹ "Can Cotton Be Raised by Free Labor," *The Emporia News*, Emporia, KS, 11/17/1860, p. 4.

²² Ross Mulcare, "Feeding Kansas: Food, Famine, and Relief in Contested Territory" (PhD dissertation, Harvard University, 2016).

²³ "Emporia and Vicinity," *The Emporia News*, Emporia, KS, 6/9/1860, p. 3.

²⁴ "Take Courage," *The Emporia News*, Emporia, KS, 9/29/1860, p. 2.

²⁵ "Timely Suggestions for Farmers," *The Smoky Hill and Republican Union*, 2/13/1862, p. 3.

Kansas who raise successfully a rotation of crops, one year after another.”²⁶ Year after year, Kansas, the crown jewel of the early settlers of the Great Plains, came under assault from the climate.

Kansas and its neighbors on the grasslands did not fail—settlers finagled various solutions to these problems. But the threat of drought never really left them, either. Rather, the anxieties about the climate—not just aridity, but conflating civilization, cultivation, forestry, and whiteness—remained salient through and beyond the end of the century. Such anxieties are remarkably captured by a letter to the farming magazine *The American Agriculturist* in 1871, which asked if “our Government may be induced to plant forest trees on those vast plains west of us? If it be true that trees cause rain, to longer neglect it is criminal;” as it would open “countless millions of acres” to drought. Without a method to “secure to us rain... there must be awful suffering... Imagine a repetition of the experience of 1859, with three millions of people in Kansas and Nebraska: the whole world would stand aghast.”²⁷

“Securing rain” by way of planting trees became a common refrain at the edge of the Plains, even as the drought faded into historical memory. Arboriculture, as advocates called it, held that not only did trees “bring rain”—they made agriculture far more profitable than it would be in an unmodified landscape. But this theory went beyond what we might think of as “planting trees”—as one of the first reports out of the newly-founded Weather Service would argue, “the normal condition of the great western plains is that of prairie,” a condition that was maintained not only by natural prairie fires but also conflagrations started

²⁶ “Agricultural Correspondences,” *The Big Blue Union*, Marysville, KS, 4/9/1864, p. 1.

²⁷ “Correspondent from Missouri,” *The American Agriculturist*, Vol. 30, 1871, pp. 7-8.

deliberately by indigenous Americans.²⁸ That idea—that indigenous peoples were responsible for the climatic condition of the American West—would be echoed across the political and intellectual spectrum: from self-proclaimed experts like Charles Dana Wilber to sober-minded scholars like John Wesley Powell or Cleveland Abbe.²⁹ These men agreed on little—Charles Dana Wilber was famous for believing that “rain follows the plow,” i.e. that simply plowing the Plains would change its climate; John Wesley Powell and Cleveland Abbe railed against these ideas as pseudoscience.³⁰ On this, however, they were agreed—the climate of the West could not be improved until it was out of indigenous hands.

As future events would prove, indigenous methods had nothing to do with the periodic drought that wracked the grasslands. Nor would arboriculture amount to anything in terms of changing the climate more broadly, despite millions of trees planted across the Great Plains.³¹ As a socio-ecological project, the settler theory that climate was a malleable set of conditions failed.

But settlers were correct on one count—they could not make a living from the grasslands ecology, not like they did in the East. Drought had wracked the Kansas settlers for nearly a decade, and it would return only a few decades later. The crisis that had beset this first wave of settlers on the Great Plains threatened the entire model of American farming. It

²⁸ I. A. Lapham, “The Great Fires of 1871 in the Northwest,” in *Report of the Chief Signal Officer to the Secretary of War, 1871-2*, Washington, D.C.: GPO, 1872, p. 187-8.

²⁹ They also bore a strong resemblance to colonial interpretations of aridity around the world. See Diane Davis, *The Arid Lands: History, Power, Knowledge*, MIT Press, 2016.

³⁰ Charles Dana Wilber, *The Great Valleys and Prairies of Nebraska and the Northwest* (Omaha: Daily Republican Print, 1881); for skepticism, see Lapham, “The Great Fires of 1871 in the Northwest,” p. 189, John Wesley Powell, *Report on the Lands of the Arid Region* (Washington, D.C.: Government Printing Office, 1878), and Cleveland Abbe, “Is Our Climate Changing?” *Forum*, Feb. 1889, p. 678.

³¹ While many of these tree-planting efforts were unsuccessful, their legacy remains intact. Great Plains forests contain a considerably higher proportion of Eurasian species than other American forests; see Bill Rankin, “Trees Trees Trees,” *Radical Cartography*, 2016, <http://www.radicalcartography.net/index.html?trees>.

begs an explanation: Why were early American settlers so vulnerable to ecological crisis? And if socio-ecological solutions like arboriculture didn't fix things, what did?

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The Steam-and-Muscle Energy Economy

The industrial energy economy which produced the hobo centered on a historically extraordinary period of uninterrupted growth, one typically attributed to fossil fuels and steam power. But steam engines in the nineteenth century carried significant disadvantages. They almost universally ran below 10% efficiency.³² Weighing tons, consuming gallons of water and many times more fuel than the energy they put out, steam engines were far too big and bulky to use in most situations. Steam had to be put on rails to move itself—outside of railroads, most engines remained stationary in factory floors. And for all the hopes and dreams heaped on steam power as a potential liberator of humanity from the drudgery of work, plenty of labor remained to be done far from the railroad, and far from the factory floor, especially in the economy's periphery.

The energy economy of the Industrial Revolution rather relied on muscle power—animal and human—for much of its useful work. Nor did these muscles merely constitute holdovers of a pre-industrial economy. The animate components of the industrial economy themselves significantly intensified over the course of the nineteenth century. Horses grew significantly larger and more powerful.³³ Human beings burned more calories over time as well. As a result, between 1870 and 1920, the American economy used steam only for the

³² Vaclav Smil, *Energy and World Civilization: A History* (Cambridge, Massachusetts: Massachusetts Institute of Technology Press, 2017), p. 243.

³³ Ann Norton Greene, *Horses at Work: Harnessing Power in Industrial America* (Cambridge, Massachusetts: Harvard University Press, 2008), pp. 83-118.

largest-scale work (factories or railroads); for medium-scale work, like providing power in places where a steam engine was impractical, it relied on horses; for small-scale work, it relied on human hands. Everywhere, as steam entered the economy, muscles grew as well. I call this energy system of dual intensification the **steam-and-muscle economy**.

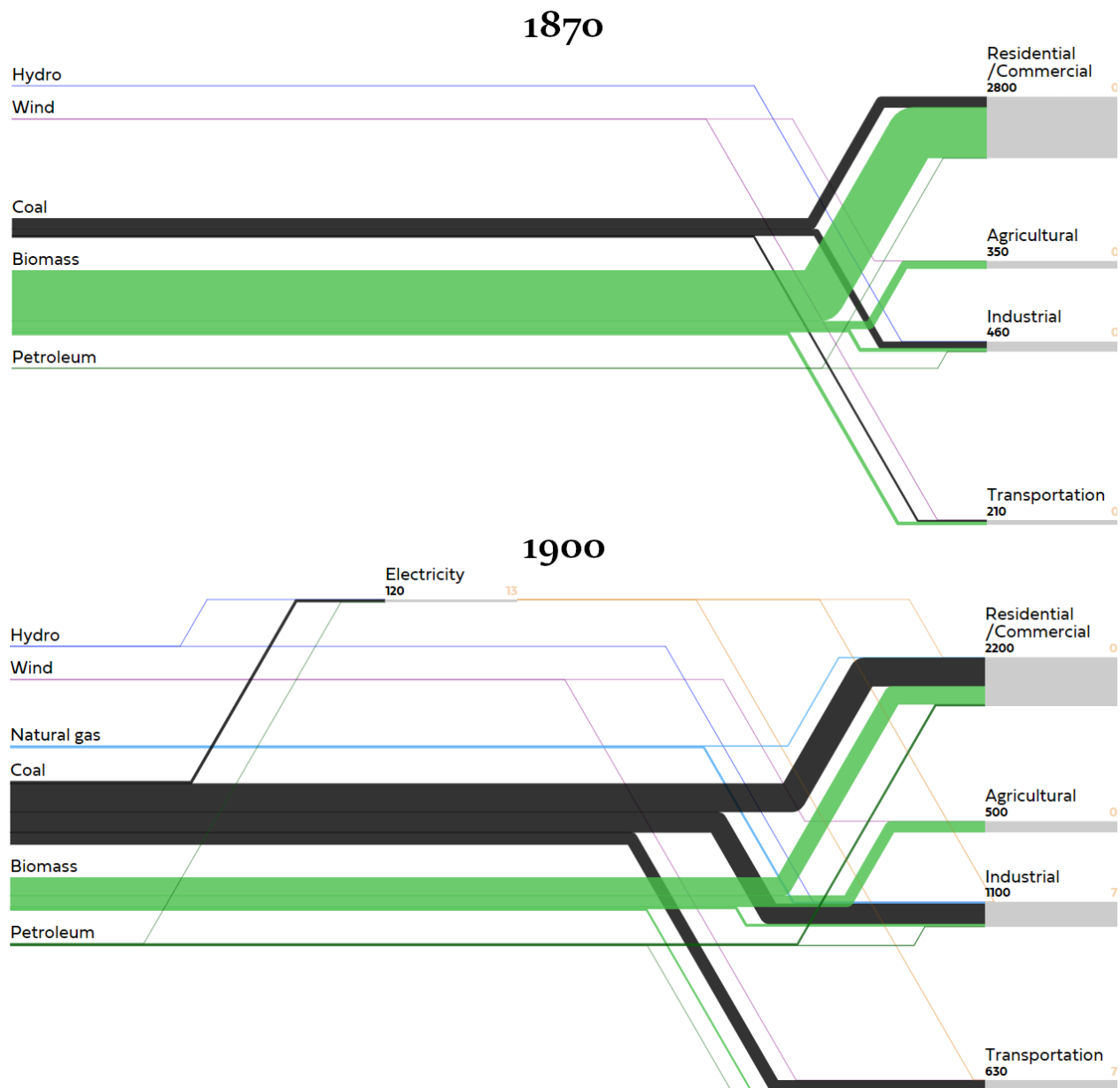


Figure 2. Chart: The Energy Economy of the United States in 1870 and 1900. This Sankey graph shows how sources of primary energy are used throughout the economy; e.g., how much coal is used by households, industrial production, and transportation. Note that throughout the period in question, household energy consumption dominates energy use (fuel for heating and cooking); within industrial uses, process heat (e.g. fuel for blast furnaces in a steel mill)

dominates. Motive power—that of steam engines or horses—is primarily confined to agriculture and transportation, with some in industry. Note that biomass includes both horse feed and fuelwood for stoves and steam engines. All units in Watts/capita. SOURCE: Nathan Matteson and the Research Computing Center at the University of Chicago, “US Energy History Visualization,” Center for Robust Decision-making on Climate and Energy Policy, Accessed 5/10/2021, <http://us.sankey.rdcep.org>.³⁴

The Sankey diagrams above depict the American steam-and-muscle energy economy around its start (1870) and its peak (1900). Each box on the left represents a source of energy, the boxes on the right economic sectors, and the lines between them, flows of power. The width of each is scaled according to the quantity of energy per capita—that is, the wider a flow, the more energy, independent of population growth. Between these diagrams, several key late 19th century trends are evident: the slow transition from wood to fossil fuels, the dominance of the home in the overall energy economy (by 1900, about half of all energy was still used in heating and cooking), the steady growth of the industrial and transportation sectors versus agriculture, and so on. On closer examination, the growth of the steam-and-muscle economy likewise becomes apparent. Between 1870 and 1900, while other sectors increasingly used coal, agriculture remained reliant on biomass—in this case, horses. Despite this, the power used in agriculture *grew*, from 350 to 500 Watts per person.

These factors—the division of power between steam and muscle, and the growth of each—heavily shaped the geography of this energy economy. Steam power predominated in the factory floors and the railroads—in a very geographically circumscribed part of the country. Muscle power, of course, predominated wherever the railroad couldn’t reach,

³⁴ Complete data in Suits, Robert, Nathan Matteson, and Elisabeth Moyer, “Energy Transitions in U.S. History, 1800-2019,” *RDCEP Working Paper Series* (2020). Fainter, yellow numbers on the right track electrical use in each sector; the yellow number in the electricity generation box at the top indicates the actual quantity of electricity produced (in 1900, 13 Watts/capita produced from 120 Watts/capita of fuel consumed).

including in parts of cities between railyards or urban freights and consumers.³⁵ But far more important on an absolute scale was the employment of muscles in extraction industries like agriculture, mining, and forestry. Mines could employ steam shovels or elevators; lumber mills could use steam engines to power their saws. But the extraction of raw material—at the face of a coal seam, along an ore vein, over the area of a hundred-acre farm, in a patch of uncut forest—these, by definition, moved over the course of time. Railroads could not reach to every log; steam shovels could not reach to every rock. Extractive industries, in other words, always sought a moving target. They required flexibility, and though neither horses nor men could compete with steam in terms of raw power, it was much easier to get horses or humans to wherever they were most needed.

The growth of every part of this steam-and-muscle economy was predicated on settler colonial expansion. In the United States, early steam engines, particularly railroads, primarily consumed wood; indeed, railroads only became majority coal in the mid-1870s.³⁶ Simultaneously, home heating—the largest part of the energy economy by fuel burned until the early 1900s—remained majority wood until the 1890s. By one estimate, from the colonial period onward, settlers chewed through seven cubic *miles* of timber for fuel alone.³⁷ This seemingly endless supply of fuel wood was the product of genocide. The catastrophic demographic collapse of indigenous nations through epidemics and war thoroughly gutted hundreds of agricultural traditions across the continent.³⁸ In the three centuries after 1500,

³⁵ The use of horses in cities is explored in Andrew Robichaud, *Animal City: The Domestication of America*, (Cambridge, Massachusetts: Harvard University Press, 2019), pp. 128-158.

³⁶ Sam Schurr and Bruce Netschert, *Energy in the American Economy, 1850-1975: An Economic Study of Its History and Prospects* (Baltimore: Johns Hopkins University Press, 1960), p. 52.

³⁷ Schurr and Netschert, *Energy in the American Economy*, pp. 45-57.

³⁸ On the combination of disease and warfare as genocide, see Benjamin Madley, *An American Genocide: The United States and the California Indian Catastrophe, 1846-1873* (New Haven, Connecticut: Yale University Press, 2016); and James Daschuk, *Clearing the Plains: Disease, Politics of Starvation, and the Loss of Indigenous Life*

forests grew in abandoned fields, and thickened as indigenous numbers thinned.³⁹ The landscape was nothing short of post-apocalyptic: overgrown villages and fields, the memory of its previous shape buried underground.⁴⁰ By some estimates, the reforestation of North America in the wake of the European conquest had sequestered enough carbon to affect global climate.⁴¹ It was these forests that American settlers took; this wood they burned. By seizing indigenous land, killing its inhabitants, and consuming the resulting trees, America industrialized.

Much the same principle held for the muscular parts of the energy economy: settler colonial seizures of land and accumulated wealth and fertility propped up expanding muscle power. The destruction of indigenous farms not only fostered the growth of massive forests across the continent; the soils beneath those farms grew as well. Just as unrelenting agriculture can exhaust soils, its destruction left American soils unusually rich. Accumulated nutrients from plant detritus and from numerous forest and prairie fires—often set deliberately—mixed into the soil, left settlers with an extraordinary bounty.⁴² The legendary fertility of American agriculture had been accumulated over time and through genocide as well. These farms produced extraordinary bounties for American agriculture with

(Regina, Saskatchewan: University of Regina Press, 2013). While the initial outbreak of diseases in North America may have been more or less unintentional, the subsequent combination of disease, material deprivation, and direct killing certainly qualifies as “genocidal.” On indigenous agricultural traditions, see Charles Mann, *1491: New Revelations of the Americas Before Columbus* (New York: Vintage Books, 2011 (orig. 2005)), pp. 195-202, 217-31, 227-318; Robin Kimmerer, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants* (Minneapolis: Milkweed, 2015).

³⁹ William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983), pp. 3-15.

⁴⁰ Heather Davis and Zoe Todd, “On the Importance of a Date, or, Decolonizing the Anthropocene,” *ACME: An International Journal for Critical Geographies* 16, no. 4 (December 20, 2017), accessed October 8, 2019, <https://www.acme-journal.org/index.php/acme/article/view/1539>.

⁴¹ Simon Lewis and Mark Maslin, “Defining the Anthropocene,” *Nature* 519 (March 12, 2015). Accessed October 8, 2019, <https://www.nature.com/articles/nature14258>.

⁴² Cronon, *Nature’s Metropolis*, pp. 98-100.

comparatively little effort, and of course fed both American industrial workers and their European counterparts. But they also fed the intensification of the muscle economy: the expansion of livestock populations largely took place on Western farms, where rich grasslands ecosystems allowed for feeding huge herds of young animals, while breed specialization that produced a 50% growth in the power of the average horse between 1850 and 1920.⁴³ Unusual forest growth and unusual soil deposits became the lynchpin of rapid American growth.

In effect, the mid-nineteenth century United States had built an industrial economy on settler colonialism. This was a trajectory quite different from the standard historical narrative of industrialization. In these, the Industrial Revolution was synonymous with a transition from an animate to a fossil economy. **Animate** economies—every pre-industrial economy—derived energy from a smattering of sources: water, wind, wood, and muscles (human and animal). These, in turn, were derived from the sun; as flows of energy, they were regulated and limited by larger Earth systems. Muscle power needed food, which was limited by how fast plants could turn sunlight into edible energy. While one could build larger waterwheels or sails, there were hard physical limits on how much energy could be extracted from a given area at once. **Fossil** economies, by contrast, extracted their energy from burning fossil fuels—coal, petroleum, and gas—and converting them into motion. Rather than being limited by the number of horses one could feed in a given area, fossil economies were only limited by the size of their engines and the amount of fuel they could access. By relying on

⁴³ Young horse populations were far higher in western states than eastern; in 1920, 40% of all horses under 1 year old were in the “West North Central” region (essentially contiguous with the Great Plains); another 20% resided in the Mountain West. See *Fourteenth Census of the United States, Vol. 5: Agriculture* (Washington, DC: Government Printing Office, 1921), p. 534. For power, the 50% figure is calculated in Suits, Matteson, and Moyer, “Energy Transitions in U.S. History,” p. 43.

energy stored on geologic timescales instead of human ones, fossil economies could extract enormous amounts of energy at once—usually far more than anyone could use in a single human generation. In theory, they seemed to escape natural limits entirely. Humans mined the past to fuel the present.⁴⁴

But where animate economies relied on *flows* of resources—the *flow* of energy from the sun through plants into people, continuous across the years, the *flow* of nutrients from plants into animals and back again into the soil—and where fossil economies relied on *stocks* of resources—coal accumulated across millions of years and burned in a single century, or phosphates or nitrates deposited in deserts across hundreds of thousands of years and then scattered across fields for a single season—the steam-and-muscle economy of the United States relied on flows that had been temporarily stopped up.⁴⁵ The early energy economy of North America operated on human timescales. It metabolized wood and grain, rather than geologic deposits of energy like coal or oil. But the forests had stored up a vast amount of energy. Within a century, American settlers largely expended deposits of fuelwood that had taken three hundred years to accumulate; they could thus fuel devices with otherwise impossibly large quantities of wood. As late as 1870, more than half of American railroads burned wood.⁴⁶ Settler colonialism had created a pseudo-fossil economy.

But although the settler colonial bounty had powered American growth for over a century, in the grasslands, it could not be relied on in the West. Here, soils were still rich, and

⁴⁴ These definitions are taken from Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (New York: Verso Press, 2016); see also E. A. Wrigley, *The Path to Sustained Growth: England's Transition from an Organic Economy to an Industrial Revolution* (New York: Cambridge University Press, 2016). I prefer “animate” to “organic” for pre-industrial economies, as fossil fuels, like fuel wood, are composed of what chemists define as organic matter.

⁴⁵ Flows and stocks are likewise derived from Malm, *Fossil Capital*.

⁴⁶ Schurr and Netschert, p. 52.

incredibly thick, but the drought could undo months of work in a single week. Without a forest cover, the work of heating homes became considerably harder. The metabolic crisis of drought, in short, interrupted the transformation of sunlight into work.⁴⁷ The exact excesses that had made the American economy so robust made it uniquely vulnerable to disruption. Worse, as we shall now see, it didn't just affect the harvests in one year—as farmers fled the drought and sold their land, their work became unavailable to their neighbors. The drought, and the resulting consolidation of farmland and lowered population density across the grasslands, crippled work on the grasslands. It is to this gap—and the settlers' solution—that we now turn.

*** **

The First Western Work Regime

When a migrant worker came to the grasslands, they entered a gnarly tangle of systems designed to regulate their movement, work, and life. "Vagrants" and other transient individuals had long been present in American society—not to mention English society before it—but the hobos and tramp lived a new kind of life.⁴⁸ The farthest someone might have gone to find work in the early nineteenth century was a couple hundred miles, if they were extraordinarily determined. "Plow boys" who sought work beyond their own families' farms; hired hands to help cut wood for steamboats and railroads—these were jobs that rarely took young men far from home.⁴⁹ A hobo, by contrast, traveled thousands of miles,

⁴⁷ On "metabolism" in this context, see Karl Marx, *Capital, Vol. 3* (New York: International Publishers, 1983 (orig. 1894)), pp. 949-950; Jason W. Moore, "Metabolic rift or metabolic shift? Dialectics, nature, and the world-historical method," *Theoretical Sociology* 46(2017): 285-318.

⁴⁸ Kristin O'Brassill-Kulfan, *Vagrants and Vagabonds: Poverty and Mobility in the Early American Republic* (New York: NYU Press, 2019).

⁴⁹ David Schob, *Hired Hands and Plowboys: Farm Labor in the Midwest, 1815-60* (Urbana, Illinois: University of Illinois Press, 1975).

often seeing most of the country in the process. Their movement was, for many, the point. But their mobility was directed by interlocking systems ranging from the ecological to the economic, social, and legal.

I term this tangle of systems a work regime. Here, “work” is not the same as “labor”—labor is human and political by definition; work instead is simply the physical act of displacing an object. Work performed by a person can be interchangeable with that performed by a horse or a mechanical engine. A work regime is thus a system that couples humans and non-humans in a single economic process—for example, the work of growing wheat and getting it to market. At the most basic level, this section explores how a society decides to do work. Why are some tasks entrusted to human hands rather than a steam engine? Why—as in this period—were workers shuttled back and forth a thousand miles or more every year, rather than resettling in the grain belt? These concerns were more than merely economic; this was not just capitalism at work. Rather, as I will show here, ecology and climate dictated variable labor demands, high wages drew in workers, the technology of the steam engine made illegal travel and an informal economy possible, and the penal apparatus of rural areas kept workers moving. The absence of any one element could—and eventually did—reshape how work was done. Steam, dirt, and capitalism made the hobo; oil and nitrates would be their undoing.

The hobo emerged alongside the grain field. Of course, hobos worked many, many jobs, not all of them worked the harvest, and for those who did, it only occupied two to ten weeks of the year. But the maize and wheat fields of the grasslands were nevertheless the heart of hobo life. They employed as many as a hundred thousand hobos, who “beat” their way from south to north, following the ripening grain. Their owners paid well—around four

or five dollars a day plus room and board in the best fields.⁵⁰ And although hobos themselves and the social crusaders who sought to solve the “tramp problem” located the origin of the tramp in economic crises like those of the late 1870s—a depression which forced unemployed men onto the streets, in their view—it is no coincidence that hobo life emerged, rose steadily, and peaked in exact synchrony with grasslands grain agriculture.⁵¹ Working the harvest was the classic way for a hobo to earn enough to make it through the winter—and it was the best job for those who sought to keep their freedom of movement.

The grain fields of the grasslands exploded virtually overnight, transforming a productive grasslands ecosystem into millions of acres of wheat and maize farms between 1850 and 1890. The extraordinary soil bounty of the West that we covered above made this landscape absurdly productive. But it carried several hidden structural problems. Wheat required significant inputs of muscle, particularly around the harvest time—up to twenty times more than at any other time in the year. The sheer increase of demand in these periods made it impossible to source enough labor from nearby, causing farmers to rely increasingly on migrant workers. Moreover, persistent climatic fluctuations made it impossible to predict ahead of time how many workers might be needed—drought, frost, and storms forced farmers to rely on ad hoc, temporary labor. The result was a chaotic tumble of hiring, striking, and firing, as some years saw the grain crop decline by half, and some years, it nearly tripled. The ecology of grain and the effects of climate each amplified already extant variability in labor—they were, in many ways, the most fundamental components of the Western migrant work regime. But these dynamics were hardly limited to the wheat harvest.

⁵⁰ Barbara Starke, *Touch and Go: The Story of a Girl's Escape* (London: Jonathan Cape, 1931), p. 269.

⁵¹ W. J. Daniel, “Kelliher, the Hobo, and the Criminal,” *Hobo News*, Vol. 10, no. 6, 6/1922, p. 10.

Most of the same trends of ecological variability and capitalist intensification, and consequently most of the same labor dynamics, were at play in the two of the other three largest hobo industries: logging and construction (mining seeming to be an exception). Across the nineteenth century, each sector grew immensely, intensified its inputs of steam, coal, and human and animal muscle, oscillated on a seasonal basis, and varied tremendously in a given year. The wheat industry came to rely on hobos in spite of the actions and motives of those involved (each of whom searched for a better, or at least more reliable, way of matching worker to job). It seems likely that the logging and construction industries would follow a similar course. Certainly, logging and construction closely paralleled wheat in how they hired and fired hobos, housed them, fed them, and exploited and broke their bodies.

Indeed, the lumber industry is often a poster child for manual labor in the late nineteenth century. By definition, lumber operations occurred far from centers of development; though railroads could transport workers most of the way to a camp, actual logging took place on a constantly advancing fringe of clear-cutting. Rather than hauling logs by train, most were sledged to riversides on ice roads before being floated downriver with the spring thaw. Taking advantage of the low friction icy environment, these “winter workscapes” centered on muscle power—those of horses and oxen to haul logs, and men to cut them.⁵² In this context, human power reached perhaps its highest intensity anywhere—a lumberjack in a northern winter camp ate in excess of 8,000 calories a day, roughly comparable to a modern Olympic athlete.⁵³ Steam powered the mills that turned logs into

⁵² Jason L. Newton, “The Winter Workscape: Weather and the Meaning of Industrial Capitalism in the Northern Forest, 1850-1950,” *Technology’s Stories*, vol. 8, no. 3 (Jan. 2021), DOI: <https://doi.org/10.15763/jou.ts.2021.01.05.03>. On “workscapes” generally, see Thomas Andrews, *Killing for Coal: America’s Deadliest Labor War* (Cambridge, Massachusetts: Harvard University Press, 2008).

⁵³ Jason L. Newton, “Forging Titans: The Rise of Industrial Capitalism in the Northern Forest, 1850-1950” (PhD dissertation, Syracuse University, 2017), p. 39.

lumber, but in the work camps, muscle ruled.⁵⁴ Relying on icescapes and the spring thaw, the work was the inverse of most hobo industries, lasting through the winter. Here, too, the caprices of the Western climate could affect work: deep snows or late thaws might see whole crews laid off or work delayed.⁵⁵ While logging camps more frequently shipped their own workers out and organized their labor in a much more systematic fashion than harvest crews, they still faced environmentally-dictated labor variability; their workers were treated accordingly.⁵⁶

Similar pressures governed construction. For obvious reasons, construction work was far more evenly distributed throughout the country than any other hobo work; it was usually piecemeal, with jobs spanning days or hours. Workers often took jobs on single buildings, leaving or being terminated when they were fired. Except on the largest projects, construction often had to be customized and quick—quintessential day labor.⁵⁷ In this work, horses once again played a key role, hauling materials from place to place on the worksite, while humans largely did the complex tasks of fitting, fastening, carving, and so on. While such worksites do not seem to have reached the sheer power output of lumber camps—judging purely by how frequently injured or sick workers could join such crews—they were

⁵⁴ *Thirteenth Census of the United States, Vol. 8: Report on Manufactures* (Washington, DC: Government Printing Office, 1913), pp. 330-370; here, lumber mills—and paper and wood pulp mills—derive over 90% of their energy from steam in the form of fuelwood and coal. Fascinatingly, despite trucking in wood, by 1910 these industries relied overwhelmingly on coal, indicating how much more closely tied the processing of wood was to the wider energy economy than lumber camps.

⁵⁵ Being laid off for deep snow is described directly in the Andrew Hanson interview, *U.S. Commission on Industrial Relations, 1912-1915: Unpublished Records of the Division of Research and Investigation*, Frederick, MD: University Publications of America, 1985 (microfilm), reel 6.

⁵⁶ Shipping of workers and their extremely abrupt termination or wage cuts are both documented extensively in interviews with Joe Stein, Math Gans, Joe Pfeiffer, Patrick Flynn, and Andrew Hanson, USCIR, unpublished records, reel 6.

⁵⁷ These dynamics are described in interviews with U.B. Martin, Thomas Wilson, Joe Stein, Patrick Flynn, Math Gans, Andrew Hanson, in USCIR, unpublished records, reel 6. See also *U.S. Commission on Industrial Relations: Final Report and Testimony, Vol. V* (Washington, DC: Government Printing Office, 1916), pp. 4935-7.

still heavily dependent on muscle power.⁵⁸ Though less strictly seasonal than logging or harvesting, construction work primarily boomed during the summer, when the ground was less hard and the conditions more friendly to outdoor work.⁵⁹ As such, and particularly coupled with the extremely short duration of such jobs, construction labor had perhaps the most extreme variability of any industry. Railroad jobs—which in the West were the most frequent and the most hated—are particularly illustrative, and reveal the close intertwining between construction, logging, wheat, and climate. When the catastrophic 1890s droughts devastated the wheat harvests in conjunction with a national depression, railroad construction declined everywhere. But it was hardest hit in the Great Plains: track mileage laid per year dropped by half nationally between 1890 and 1897 versus the 1880s—but in the Great Plains in 1895, more miles of track were *abandoned* than laid.⁶⁰ Such a decline meant fewer railroad ties, and lower lumber demand. Every Western industry was prey to drought.

The climate precarity of these industries could make the work histories of an individual hobo quite breathtaking. In the oral histories we have, it is exceedingly rare to find a worker who stuck to a single profession. Far more common were stories like the one U. B. Martin gave to a government interviewer in the mid-1910s. In the year before his interview, Martin said he worked dozens of odd jobs in Chicago, most lasting several hours, often eating nothing to save money; in January, he finally found an ice company that shipped him out to Yorkville, in southern Wisconsin, to cut ice. The work was difficult, the housing a crowded

⁵⁸ Interviews with Norman Daniel and Andrew Hanson, USCIR, unpublished records, reel 6.

⁵⁹ Schwantes, *Hard Traveling*, p. 28.

⁶⁰ United States, Interstate Commerce Commission, et al., *Annual Report on the Statistics of Railways in the United States* (Washington, D.C.: U.S. Government Printing Office, 1889-1954).

camp laden with some sort of coughing sickness; after two and a half weeks, he quit. He was out of work and sick for about eight weeks in seven different cities—Chicago, Pittsburgh, Junction, Ashtabula, Cleveland, Indianapolis, and Lafayette before he got a job in Green Bay, laying a railroad through a swamp. After ten more days, he quit and worked a cannery for a week in the city instead, before jumping a freight to Minneapolis. He agreed to go out to the harvest fields of the Red River Valley, but the train was diverted, and “against his own will” he was “shipped to a railway construction camp on the Soo Line.” The few days of work was miserable; the board gave him food poisoning; he was laid up another week—and then resumed work, sick, on a construction project in Minneapolis. The five weeks before his interview? Once again, he was out of work; “He sleeps most of his nights in the municipal free lodging house, there gets a piece of bread and a cup of coffee for supper and the same for breakfast... sometimes starves; he is looking eagerly for work but cannot find it.”⁶¹

Other hobos sought work on steamers going overseas, or crossed the country to the West or East Coasts. But nowhere did they find permanent unemployment. Unemployment was rampant in the eastern, urban core of the nation—in the western hinterland, jobs could be found, but they were almost never consistent from week to week. For the worker, long periods of unemployment were the norm; for the employers, the same phenomenon looked like constant worker shortages and surpluses that never quite met their variable demands. In short, the hinterland could not supply its workers from its local workforce—just as cities needed farmers for food, farmers needed cities for hobos.

The workforce they found was an eclectic one. The average hobo was young, male, and white, but such a summary elides and hides more than it reveals. Many hobos had run

⁶¹ Interview with U. B. Martin, USCIR, unpublished records, reel 6.

away from a broken home, but many more stayed on the road through adulthood, and others had entirely different reasons for becoming transient. Some worked until their bodies were entirely broken through manual labor. The most systematic survey of hobos found that 3% were women—and while many women were likely deterred from the road by the constant threat of assault, others found surprising ways to leverage their gender.⁶² The same survey found 80% had gone on the road to find work, but 45% had what contemporaries called “the wanderlust”—an incurable urge to travel and see the world.⁶³ Many fancied themselves authors, poets, and artists.⁶⁴ As for race, hobo encampments (“jungles”) rarely had a color line, with blacks and Mexican-American workers usually sharing in communal food and shelter.⁶⁵ Perhaps most remarkably, the road was something of a haven for queer and homosexual Americans—overt romantic or sexual advances were hardly considered abnormal in hobo settings.⁶⁶ Certainly, employers did not seek out these groups—but the nature of migrant work allowed them to flourish.

We will explore the agricultural work of hobo laborers in more detail in Chapter Two, and the urban environments they inhabited in Chapter Three. For now, it is more important to understand how they got between them. Trains stopped in and around towns and cities all the time: to load cargo and people on and off, to take on fuel, and to take on water to operate their steam engines. These rail yards lay at the heart of every American city and nearly every town of the late nineteenth century, and the neighborhood adjacent to them—

⁶² This figure is likely an underestimate of the number of women migrant workers—“hobos,” after all, were not necessarily a group contiguous with “migrant workers.”

⁶³ Anderson, *On Hobos and Homelessness*, Raffaele Rauty, ed., (Chicago: University of Chicago Press, 1998), p. 82.

⁶⁴ Nels Anderson, “Document 25,” and “Document 119,” Ernest Burgess Papers, Box 127, Folder 1, Special Collections Research Center, University of Chicago Library.

⁶⁵ Anderson, *On Hobos and Homelessness*, p. 44.

⁶⁶ Anderson, *On Hobos and Homelessness*, p. 70.

what the hobo called the “main stem” or the “main drag”—lay at the heart of hobo life.⁶⁷ These neighborhoods acquired a seedy reputation quite quickly, from the famous “Hobohemia” of Chicago to its smaller cousins in Minneapolis or Kansas City. Here is where one would find others who had pursued the same life, would find temporary lodging during winter or the occasional stay in the city, find comfort, food, and sexual companionship, or find employment. By the end of the century, businesses called “employment agencies” became a ubiquitous feature on the streets of the main stems, selling the promise of working with a crew out West, pointing to the centralization and increasing structures of migrant work systems over time.⁶⁸ Other parts of the town (especially those further away from the main stem) were vital sources of food and money for beggars; if a hobo fell on hard times or a dry spell of work, they often found sympathetic families.⁶⁹ Here, the built environment favored them: it was easy to knock on the back door of a family’s home, do chores, build trust, and beg for food when the vast majority of people lived in single-family homes rather than multi-family tenements.⁷⁰

But regardless of social conditions in cities and labor demands in the country, nothing like the hobo work regime could have arisen without the railroad to bind them. Hobos were utterly reliant on them to travel—the decline of the steam railroad was a major component in the decline of the hobo labor system. Trains, in many ways, were ideal environments for determined individuals to steal rides while evading detection—especially those carrying

⁶⁷ Nels Anderson, *On Hobos and Homelessness*, pp. 32-3.

⁶⁸ Nels Anderson, *The American Hobo: An Autobiography* (Leiden, Netherlands: E. J. Brill, 1975), p. 94 and Anderson, *On Hobos and Homelessness*, p. 33.

⁶⁹ This was known as “tank town.” Anderson, *On Hobos and Homelessness*, pp. 42-3.

⁷⁰ For the proportion of people living in such homes—95%—see Robert J. Gordon, *The Rise and Fall of American Growth: The U.S. Standard of Living since the Civil War* (Princeton, New Jersey: Princeton University Press, 2016), pp. 43-7.

freight. Railroads operated with minimal crew, leaving boxcars occupied only by cargo. Animal, plant, or inanimate, these cargos rarely complained about the extra passenger, and did nothing to alert the crew.⁷¹ Their policing instead depended largely on the railroad workers, who were often quite sympathetic to migrants, and those who weren't could be bribed in cash or kind.⁷² The end result could be downright funny—one hobo described how he once “saw freight trains coming and going, all with men riding in full view. On some trains as many as twenty could be seen.”⁷³ To those who lived in poverty but had to cross vast distances, the railroad was a godsend.

But for all the sympathetic railroad employees, there were also railroad police, “the worst enemy” of the hobo.⁷⁴ Hired by railroad companies to discharge free riders, they responded to migrant riders with excessive force, up to and including chasing them off with bullets.⁷⁵ Some railroad cops who patrolled particularly well-traveled beats could earn reputations in hobo communities nationwide.⁷⁶ But hobos did not lack for strategies to evade them. Many “rode the rods”—supporting themselves in the undercarriage of a freight car and lying underneath during the entire train journey.⁷⁷ Others, if they were desperate, clung to

⁷¹ Anderson, *The American Hobo*, pp. 81-5; Windy Bill (pseudo., Ben Goodkind), *A Poor American in Ireland and Scotland* (San Francisco: W. S. Van Cott & Co., 1913), pp. 96, 171. William Z. Foster, *Pages from a Worker's Life*, 1939, in Iain McIntyre, ed., *On the Fly! Hobo Literature and Songs, 1879-1941* (Oakland, California: PM Press, 2018), pp. 105-7; Harry Kemp, *Tramping on Life: An Autobiographical Narrative*, 1922, in McIntyre, *On the Fly!* pp. 114-5.

⁷² Edwin A. Brown, “Broke:” *The Man Without the Dime* (Boston: The Four Seas Company, 1920 (orig. 1913)), p. 15.

⁷³ Anderson, *The American Hobo*, p. 81.

⁷⁴ A-No. 1, [pseudo.] *From Coast to Coast with Jack London, by A-No. 1, the Famous Tramp, Written by Himself from Personal Experiences* (Erie, Pennsylvania: The A-No. 1 Publishing Company, 1917), p. 111.

⁷⁵ Harry Kemp, *Tramping on Life: An Autobiographical Narrative*, 1922, in McIntyre, *On the Fly!* p. 115.

⁷⁶ A-No. 1, *From Coast to Coast with Jack London*, p. 111.

⁷⁷ Goodkind, *Adventures*, pp. 104-5; Glen Mullin, *Adventures of a Scholar Tramp*, 1925, in McIntyre, *On the Fly!* p. 190; Unknown, “Hobo John,” from George Milburn, *The Hobo's Hornbook*, 1930, (orig. song from the 1880s) in McIntyre, *On the Fly!* p. 29—prominent lyrics including railroad baron Jay Gould's unnamed daughter (either Anna or Helen) exhortation that, “If ride they must, let ‘em ride the rod, / Let ‘em put their trust in the hands of God...”

the brakebeam, mere inches from the ground.⁷⁸ The train kicked up “giddy particles of fine dust and tiny bits of stone” right into their faces, making it hard to breathe, but as long as they were alert and did not fall asleep or slip, it made them virtually undetectable.⁷⁹ By strategically moving below, into, above, and between cars—and when they were desperate, between trains—hobos could fairly reliably get from place to place. Above all, the key was to board a train when it was already moving. At this, many failed: stories of fellow hobos losing life or limb abound in migrant narratives.⁸⁰ But many more succeeded.

The mechanics of railroads themselves facilitated this art. Steam railroads stopped, started, and slowly accelerated all the time, notably uphill stretches, sidings (which allowed trains to pass one another), and above all, water tanks (points at or between stops to take on water for the operation of the steam engine). Water tanks in particular could be even better points to illegally board a train than at a city or town, where the railroad operators and their security would be on highest alert and the contents of the train were constantly shifted around.⁸¹ If one was caught and put off the train in the proverbial middle of nowhere, one could usually find another train at the next water tank.⁸² Certainly, it was a lot smarter than trying to board a train at speed—many, many migrants described loss of life or limb by those desperate enough to attempt it.⁸³ Water tanks consistently afforded migrants opportunities

⁷⁸ Anderson, *The American Hobo*, p. 100; Mullin, *Adventures of a Scholar Tramp*, p. 190; William Staats, “A Tight Squeeze,” 1879, in McIntyre, *On the Fly!* pp. 14-5; see also the illustration from Josiah Flynt, *Tramping with Tramps*, in McIntyre, *On the Fly!* p. 67.

⁷⁹ Barbara Starke, *Touch and Go: The Story of a Girl's Escape*, London: Jonathan Cape, 1931, p. 151.

⁸⁰ Nels Anderson, “Along the Main Stem with Red,” Unpublished Essay, 1917, p. 2, Ernest Burgess Papers.

⁸¹ Anderson, *On Hobos and Homelessness*, p. 42; Jack Black, *You Can't Win*, 1926, in McIntyre, *On the Fly!* p. 93; A-No. 1, *From Coast to Coast*, pp. 19-20; Goodkind, *A Poor American*, p. 118; Unknown, “The Dying Hobo,” or “Streams of Whiskey (The Hobo's Last Lament),” 1917 song, in McIntyre, *On the Fly!* pp. 39-40, including lyrics of “Beside a western water tank / One cold November day, / Inside an empty boxcar / A dying hobo lay...” The hobo's friend eventually leaves him to die when he hears the whistle of an approaching train that he knows he can take from the tank.

⁸² For example, A-No. 1, [pseudo.] A-No. 1, *From Coast to Coast with Jack London*, p. 92.

⁸³ Anderson, *The American Hobo*, pp. 98-9.

to board trains safely. In other words, the steam locomotive technology was ideal for those who needed to sneak on and off a train—the ecology of the railroad itself facilitated migrant travel.



Figure 3. Map: “Trunk Lines” (Major Railroads) the American West, 1893. SOURCE: image by author.⁸⁴

If the main stem and the water tank were the ideal starting points for a hobo’s journey, the other node of hobo life was what they termed the “jungle.”⁸⁵ These camps would be established on the edge of small towns and cities across the Midwest—in Kansas, “outside

⁸⁴ Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: W. W. Norton & Co., 2012), pp. 494-5.

⁸⁵ Anderson, *On Hobos and Homelessness*, pp. 43-49.

every town was a jungle.”⁸⁶ They were built away from the city buildings, sheltered and hidden by trees near the railroad, and near running water.⁸⁷ All were features that had been emphasized by the ways Western Americans constructed their environment: tree planting, siting towns and railroads near running water, and giving plenty of space over to no particular function due to an inefficient distribution of property rights.⁸⁸ The jungle was made hospitable not just by environmental but also cultural factors. Hobos behaved under strict ethical codes: no one was to steal from another hobo; no one was to simply “bum around” the camp and beg from their fellow migrants, but all were to share their meals with a hungry fellow traveler, and discipline and punishment would be doled out by *ad hoc* democratic councils. Stories and song dominated camp life, but the only personal information they might exchange was where the work was.⁸⁹ Some banded together for larger jobs, but often, one would move from the jungle out to farms or industrial camps, asking individual property-owners if they had any work to do.⁹⁰ Occasionally, one would board with their employer for the few days or weeks that the job took before moving back to the jungles after its completion.⁹¹ The jungles were also constant targets of police raids, especially if they were more-or-less permanently established. Migrant communities usually had contingency plans in place for such events, moving the most vital pieces of their camps out of view (cookware and any tools—which, conversely, were the exact things the police

⁸⁶ Anderson, *The American Hobo*, p. 95.

⁸⁷ Anderson, *The American Hobo*, p. 53.

⁸⁸ On the tendency to center Western life on water, see Donald Worster, *An Unsettled Country: Changing Landscapes of the American West* (Albuquerque, New Mexico: University of New Mexico Press, 1994); on property, Richard White, *It Is Your Misfortune and None of My Own: A New History of the American West* (Norman, Oklahoma: University of Oklahoma Press, 1991).

⁸⁹ Anderson, *On Hobos and Homelessness*, pp. 43-49.

⁹⁰ Anderson, *The American Hobo*, p. 95.

⁹¹ Anderson, *The American Hobo*, p. 95.

targeted).⁹² The jungle, like other centers of migrant movement, was designed for maximum flexibility.

The largest jobs often offered room and board as part of hobo compensation—though as one hobo joked, “Most of us know what that means; poorest of food and hunt your lodging around a straw stack.”⁹³ Food was whatever the cook could procure at cheap prices—monotonous, bland, and sometimes not delivered until the work was already done.⁹⁴ Lodging, meanwhile, could be in repurposed old boxcars, shacks, barns, or wherever else.⁹⁵ Camps often had bunks stacked several stories high, with shoddy bedding that often homed insect parasites.⁹⁶ Jobs that a hobo negotiated on their own usually involved sleeping somewhere on the family farm and sharing in the family meals—an intimacy they shared for only a few days or weeks before moving on.⁹⁷

Whether begged or offered in compensation, food and lodging usually depended on women’s unpaid labor and generosity to provide. One matriarch of a particularly large commercial farm in North Dakota, Mary Dodge Woodward, recorded the sort of work that a typical harvest placed on her in her diary: “Harvest has started. Now there will be no rest for man, woman, or beast until frost which comes, thank heaven, early here. I was nearly beside myself getting dinner for thirteen men, besides carpenters and tanners,” work that, that year, fell exclusively on her as her daughters convalesced from a fever.” I baked seventeen loaves of bread today, making seventy-four loaves since last Sunday, not to mention twenty-one

⁹² Anderson, *On Hobos and Homelessness*, pp. 46-49.

⁹³ Charles Kruse, “Harvest Time,” *Hobo News*, Vol. 3, no. 5, 8/1917.

⁹⁴ Edwin A. Brown, “Broke:” *The Man Without the Dime* (Boston: The Four Seas Company, 1920 (orig. 1913)), p. 211.

⁹⁵ John McCook, “A Tramp Census and Its revelations,” *Forum* 15 (August 1893): 753-765, pp. 756-7; see also “Leaflet No. 8 Issued by the Migratory Workers’ Union,” *Hobo News*, Vol. 4, no. 9, 5/1919, p. 11.

⁹⁶ USCIR, *Final Report*, Vol. 5, pp. 4935-7.

⁹⁷ Anderson, *The American Hobo*, p. 95; Brown, “Broke:” *The Man Without the Dime*, p. 213.

pies, and puddings, cakes, and doughnuts.”⁹⁸ The lodgings of men made for just as much labor: “The sheets and pillowcases for the twelve beds make big washings. I pound the men’s in a barrel so that they need no rubbing.”⁹⁹ Frequently, large outfits hired migrant women to cook for large crews.¹⁰⁰ In both the frantic harvest times and the tiny kindnesses of lending food to a begging hobo, the domestic labor needed to keep the hobo work regime afloat still fell overwhelmingly on women.

For hobos, the narrow window for harvest work matched their own needs perfectly. In the few months of autumn where this became relevant, they would chase the harvest north, following the ripening grain from Kansas all the way to Alberta.¹⁰¹ Around this season, they might sandwich fruit harvests in the upper Midwest (especially in northern Michigan or Wisconsin), or mining jobs in Michigan’s Upper Peninsula, Minnesota’s Mesabi Range, or further West.¹⁰² Late in the year, they might work at construction, or forestry, as the timber-cutting season ran straight through the winter.¹⁰³ Much of the winter would be given over to bumming around a city, perhaps taking a job in a factory before, in spring and summer, one might seek out construction work. In theory, and occasionally in practice, a hobo could rotate through the entire year to keep at various tasks. More often, they would stick to only a couple that they enjoyed or excelled at, and take the rest of the year off—something middle-class

⁹⁸ Mary Dodge Woodward, *The Checkered Years: A Bonanza Farm Diary, 1884-88*, Mary Boynton Cowdrey, ed. (St. Paul: Minnesota Historical Society Press, 1989), p. 90. Diary entry from 8/11/1885.

⁹⁹ Dodge Woodward, *The Checkered Years*, p. 183. This came from a similar harvest, two years later—8/1/1887.

¹⁰⁰ “Back to the Farm,” *The Topeka State Journal* (Topeka, KS), 8/11/1915, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1915-08-11/ed-1/seq-2/>, which notes that 10% of women directed by the Kansas harvest employment bureau were women.

¹⁰¹ Anderson, *The American Hobo*, p. 89; Anderson, *On Hobos and Homelessness*, p. 65.

¹⁰² Anderson, “Document 73,” Ernest Burgess Papers.

¹⁰³ Cronon, *Nature’s Metropolis*, pp. 155-6; Anderson, *On Hobos and Homelessness*, p. 65.

writers often fretted about, but likely a necessity in the sort of backbreaking work they encountered.¹⁰⁴

The harvest placed hobos squarely in the eco-cultural communities they passed through, but it was the rest of their lives that rooted them even in places where they spent only a little time. Much of their emotional experience of the landscape centered around travel. Nearly every hobo who wrote about their experiences commented extensively on the terror and discomfort of a surreptitious train ride: of catching pebbles, rocks, sparks, and dust in the face or drifting off and waking up to imminent death. Those living the jungles, certainly, had arguably the most intimate experience with the land of anyone: drinking from the streams, sheltering among the trees, sleeping on the ground. Certainly, however, their most important experiences were rooted in the work that they did—work that extended far beyond the grain harvest, even in the grasslands regions.

After climate, ecology, economics, and technology, the law was the final component in this work regime. The legal and penal apparatus of rural towns, I argue, ensured that transient workers remained mobile, and far both literally and figuratively from the minds of the settler population. While nominally Americans had freedom of movement and freedom to sell their labor as they pleased, in practice there was little chance that settlers would tolerate their own workforce if it weren't for the assurance that they might move on.¹⁰⁵ Using a variety of legal tactics, nonworking hobos were constantly pushed out to other towns, a practice hobos themselves termed the "floater custom."¹⁰⁶ The law—and especially its

¹⁰⁴ Anderson, *On Hobos and Homelessness*, p. 32.

¹⁰⁵ Note the contrast with migrant work in grasslands done by bonded labor systems, e.g. serfs in Russia—David Moon, "Peasant Migration, the Abolition of Serfdom and the Internal Passport System in the Russian Empire, c. 1800-1914," in David Eltis (ed.), *Free and Coerced Migration: Global Perspectives* (Stanford, California: Stanford University Press, 2002), pp. 324-60.

¹⁰⁶ Anderson, *On Hoboes and Homelessness*, p. 49.

punitive and penal arms—carefully policed the most visible places in small towns, pushing transient populations into the literal margins. In doing so, it fundamentally altered the ecology of the landscape and its workers. Instead of shuttling back and forth between city and country, maintaining permanent ties to both, migrant workers had to be permanently peripatetic.

Vagrancy laws had long been on the books; this was less a story of criminalization and more a story of shifting interpretation and increasing enforcement.¹⁰⁷ By the early twentieth century, nearly every state and territory passed anti-vagrancy legislation.¹⁰⁸ Most of these laws had been in place since the mid-nineteenth century, hardly changed in language. They criminalized “having no visible calling or business to maintain [oneself],” “lodging in or found in the night-time in outhouses, sheds, barns or unoccupied buildings or lodging in the open air, and not giving a good account of themselves;” even “all who stroll over the country without lawful occasion, and can give no account of their conduct consistent with good citizenship, shall be held to be tramps.”¹⁰⁹ They were so vague that they could be turned to any whim of an arresting officer.

And so they were. Police tolerance for hobos varied by the season; as one hobo described: “When men were needed for harvest work the police and the railroad authorities did not disturb them much, when stealing illegal rides on the trains. But once the grain was

¹⁰⁷ Note that this interpretation runs directly counter to the established literature; see Monkonnens, *Walking to Work*, pp. 161-5.

¹⁰⁸ The one exception was South Dakota, which legislated against it at the municipal level anyway. Legislative Reference Department. *Laws of the various states relating to vagrancy. Comp. for use of the Commission appointed to investigate the subject of vagrancy, disorderly conduct, habitual drunkenness, etc. June, 1910* (Lansing, Michigan: 1910). Available online, *Handle.net*, Accessed 3/20/2020, Copyright 2020, <https://hdl.handle.net/2027/hvd.32044032116121>.

¹⁰⁹ Legislative Reference Department, *Laws of the Various States Relating to Vagrancy*,” pp. 15, 14, and 18—the quotes are taken from laws in Iowa, Illinois, and Minnesota, respectively, but most of these phrases were found throughout laws in the Great Plains.

gathered in and threshed... things were very different!" After the harvest, many a hobo had "his earnings taken from him by the authorities of the towns."¹¹⁰ Other crackdowns might be prompted by "a general order to clean up the town."¹¹¹ But they could be far more arbitrary. "Once or twice, sheriffs who were bent on arresting me because I had no visible means of support, let me go, because it awed them to find a tramp reading Shakespeare..."¹¹² Others could be let go for having (or pretending to have) a wealthy family, or having callouses on their hands, proving that they worked.¹¹³ A young woman was far less likely to be stopped, as were men who could convince young women to tramp with them.¹¹⁴ Determined police, judges, and lawyers would completely ignore evidence like money to support oneself, or even "credentials in my pocket proving that I had come direct from one job in search of another."¹¹⁵

Being arrested was one of the better outcomes for a hobo. Police brutality was a fact of their lives. Indeed, some policemen deliberately cultivated bad reputations to keep hobos from trying to come through their towns in the first place.¹¹⁶ Police raids targeted the cookware of hobo jungles, hoping that they could starve the vagrants out of town.¹¹⁷ One social reformer, Edwin Brown, who lived as a tramp for over a year to document their living conditions, implored his readers to "Think of the barbarous orders of a railroad superintendent, to push or throw people from a fast running train, or leave them on the vast

¹¹⁰ Charles Ashleigh, *Rambling Kid*, 1930, in McIntyre, ed., *On the Fly!* p. 202.

¹¹¹ Jack Black, *You Can't Win*, 1926, in McIntyre, ed., *On the Fly!* p. 91.

¹¹² Harry Kemp, *Tramping on Life: An Autobiographical Narrative*, 1922, in Iain McIntyre, ed., *On the Fly!* p. 114.

¹¹³ Kemp, *Tramping on Life*, p. 117.

¹¹⁴ Barbara Starke, *Touch and Go: The Story of a Girl's Escape*, London: Jonathan Cape, 1931, p. 50.

¹¹⁵ Black, *You Can't Win*, p. 91; quote from D. M. C., "Siberian Methods in the United States: Schuettler's Spring Drive," *Hobo News*, 8/1917, in Iain McIntyre, ed., *On the Fly!* p. 250.

¹¹⁶ Again, A-No. 1, *From Coast to Coast with Jack London*, p. 111.

¹¹⁷ Anderson, *On Hoboes and Homelessness*, p. 47.

plains of the West in a desperate blizzard, as I have seen done.”¹¹⁸ The constraints on police brutality might be depressingly familiar to a modern reader: virtually none. “[W]here someone has been murdered, or a sick man has been thrown in jail and his life taken there, or some other outrage has been committed by their wicked policies, they always try to blanket the wrong by making a public statement that the victim had 'a record' and was well known to the police.”¹¹⁹ Hard times only exaggerated such policies.

Though not all these forces worked in the same directions, they collectively created the first Western work regime. The variable demands of climate and ecology forced agricultural employers to look beyond their own neighbors, drawing on temporary laborers sourced from further and further away. High wages, (sometimes misleading) advertisements, word of mouth, and a desire to escape pushed migrant workers west. The legal and penal regimes of rural towns sheltered them, but also kept them from settling in any one place. The local ecology hid hobo jungles, and specific technologies allowed them to steal rides from railroads. Together, these factors regulated a vast flow of work from the east to the west—a seemingly-endless source of human energy that could be tapped whenever it was needed.

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Conclusion

When Nels Anderson finally reached the fields—a long journey that involved being put off by railroad cops, catching a few more trains, evading police in Kansas City, and constantly begging food along the way—he found only disappointment. “There were no job

¹¹⁸ Edwin A. Brown, “Broke:” *The Man Without the Dime*, p. 38-9.

¹¹⁹ Brown, “Broke,” p. 18.

offers for harvest hands, which meant harvest hands were in oversupply.”¹²⁰ Beating town just before a new series of arrests, Anderson found himself somewhere near Nebraska a few days later, knocking on farmhouse doors and begging for work. By the third or fourth one, he found some—binding the stalks of wheat and stacking them into “shocks.”¹²¹ Though he had “the knack” for that job already, and the farmer treated him like family, the work only lasted three days. Anderson continued to bounce around for work for two weeks, but even the big harvest towns were full only of aimless job-seekers. The farmers, one man complained to Anderson, were being stingy, only taking “prime young steers.” Only two years earlier, a good harvest had left them “begging for harvest hands.”¹²²

Anderson would go on to have a remarkable life, completing a PhD in sociology at the University of Chicago, studying the hobos he had lived with for so long.¹²³ Most of his former colleagues were less fortunate. Farm work, inconsistent meals, poor shelter, and constant travel broke the human body. Many of the older hobos Anderson later interviewed had fallen into alcoholism.¹²⁴ Others found ways out of the life, but this, too, was more of an acquiescence to a system into which they had never really fit.

The work of hobos in many ways was that of an agricultural proletariat, a group exploited and downtrodden by the capitalist system, forced to scrape by. But capitalism alone could not explain the peculiar nature of the hobo—itinerant, migrant, and forced to the fringes of society. Rather, the patterns of their lives lay in the ecological dimensions of their work—in the way environment collided with the social and legal architectures of the rural

¹²⁰ Anderson, *The American Hobo*, p. 94.

¹²¹ Anderson, *The American Hobo*, p. 95.

¹²² Anderson, *The American Hobo*, p. 98.

¹²³ Anderson, *The American Hobo*.

¹²⁴ Anderson, “Document 43,” Ernest Burgess Papers.

grasslands. The first western work regime was a cruel one—not by necessity, but rather by choice. Employers abused hobos because they could.

In classic analyses of settler colonialism, scholars write of a triad: the settler, the native, and the slave. The settler takes land from the native, and, having eliminated them, then appropriates the necessary labor from the slave.¹²⁵ The foregoing analysis should make clear two facets of settler colonialism in the American West. First, what was extracted from the native was not merely land, but also wealth produced by genocide—accumulated energy and biomass, which accelerated the colonization, development, and enriching of the grasslands. But these came at the cost of intense climatic variability. Second, slavery was kept from these lands by several ideological pressures, but needs for additional labor did not go away—indeed, climate exacerbated these requirements—so they were instead fulfilled by an itinerant group of young men, drawn by wages and the hope of a different life. In the West, then, it was settler, native, and migrant.

As we shall later see, hobo life had a certain draw. The independence, autonomy, and camaraderie of the road had few parallels in other kinds of work. But the system would only get crueler. In the next chapter, I explore the hobo grain harvest at its chaotic height. Multiple climatic crises prompted several attempts at systematic reform through the 1890s and 1900s, but none of them succeeded. Unpredictability reigned; ad hoc labor arrangements kowtowed to its vagaries. The result—precarity for the laborers, uncertainty for the farmowners, and lawbreaking threatening the state—was an arrangement no one really wanted, but which no one knew how to solve.

¹²⁵ Tuck and Yang, “Decolonization Is Not a Metaphor.”

Chapter Two

Harvesting: Wheat and Climate

Edwin Brown had an eye for tragedy. A social reformer, he traveled the country in the spring of 1909 in search of the answer to a simple question: “why is there poverty and suffering amidst abundance and plenty?”¹ In that journey, he witnessed hundreds of little tragedies and horrors, from destitution to death and disease to wrongful imprisonment and starvation. It is striking, then, how much he lamented the life of a boy he met in Kansas City, “starving and shelterless... down and out, ill-used, yet ever ready at the first suggestion of hope to rush again into life’s battle.”²

What had driven the boy to the edge of starvation? Like tens of thousands of other boys, men, and women, he had made his way to Kansas City to participate in the single largest migratory workforce in the United States at the time: the wheat harvests of the Great Plains. Tilling fields hundreds of miles from most labor pools, Kansas farmers paid a premium for hands to harvest their wheat—anywhere from \$2 to \$4 dollars a day, for about a month. It was the sort of money that could sustain a person through an entire unemployed winter—the sort of money that allowed them a little security before finding their next job. But the boy had come a few weeks too early. Out of work and waiting for the harvests to start, he was at the mercy of unsympathetic policemen and poor houses too full to accept him.³ His error was

¹ Edwin A. Brown, *“Broke:” The Man Without the Dime* (Boston: The Four Seas Company, 1920 (orig. 1913)), p. xii.

² Brown, *“Broke,”* p. 75.

³ Brown, *“Broke,”* pp. 71-5.

that he had arrived exactly when the harvests usually started. “It has been such a cold, late Spring,” he explained to Brown—the harvests had been delayed by rain.⁴

Harvest hands routinely met with such a fate; they came to the Great Plains wheat harvest with the understanding of certain climatic and crop conditions and found them changed at the very last moment. In this chapter, I explore the relationship of migrant work with the Great Plains wheat harvest. I argue that an unpredictable climate made the labor demands of the harvest similarly unpredictable, forcing farmers to rely on migrant workers. It was a system no one quite wanted. Farmers preferred to recruit familiar faces if they could—but the vagaries of Great Plains climate ensured that no one had the same number of job openings from year to year. Railroad companies disliked the surge of migrant traffic, as the impoverished workers routinely stole rides on their routes, often leading to deadly accidents—but the biology of grain plants ensured that harvest time required a huge influx of human labor for a month’s worth of work. And migrants found themselves at the mercy of a work regime that demanded precarity, demanded they travel to the Plains without really knowing if there was a job on the other side for them—but the intersection of climate and capitalism meant no safety net. The harvest had no architect—it was an emergent property of the Great Plains environment and economy.

It was also a highly regionally specific phenomenon to the Great Plains. As I will argue throughout the rest of the dissertation, migrant work played a vital role in industries across the North American grasslands. But harvest work in Great Plains agriculture looked nothing like that of other United States agricultural systems. Farmers on the East Coast relied on migrant workers, but the climate of the Eastern seaboard had little of the variability of the

⁴ Brown, “*Broke*,” p. 71.

American West, and the regularity of the work meant regularity of the workers. The East Coast thus tended to rely on immigrant workers who were easily controlled and predictable.⁵ The South, likewise, lacked the West's unpredictability, and its valuable cotton crop required far more consistent attention than the wheat of the Great Plains; its farmers kept bonded labor around in the form of sharecroppers.⁶ Even the Far West, although sharing the climatic uncertainty of the Great Plains, exhibited a very different labor structure. California specialized in valuable perennial crops supplemented with vast irrigation networks, smoothing out the oscillations of the climate, allowing them to rely on long-term migrants who stayed year after year: first Chinese and Japanese laborers, and finally, Mexican-American migrants.⁷ Only in the Great Plains did climate and crop create such a striking seasonal migration, coupled with staggering levels of uncertainty for the laborers.

These harvest hands typically numbered in the tens of thousands, with roughly 50,000 making the annual journey from eastern states to the Great Plains in the 1890s and 1900s, and over 100,000 regularly arriving by the late 1910s. However, the number of jobs available hardly matched that number neatly: in drought-ravaged years, less than 10,000 jobs might be available to out-of-state workers, while rain-fed bumper crops could require upwards of 150,000.⁸ Like other migrant workers in the region, harvest hands were

⁵ Cindy Hahamovitch, *The Fruits of Their Labor: Atlantic Coast Farmworkers and the Making of Migrant Poverty* (Chapel Hill, North Carolina: University of North Carolina Press, 1997).

⁶ Douglas Blackmon, *Slavery By Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II* (New York: PenguinRandom House, 2009).

⁷ Carey McWilliams, *Ill Fares the Land* (Boston: Little, Brown, & Co., 1942); see also Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1985).

⁸ These estimates are taken from various newspaper accounts. For a detailed breakdown of 1890s estimates, see pages 27 and 30. "Why Harvest Hands Rode Free," *Phillipsburg Herald* (Phillipsburg, KS), 7/5/1900, <https://chroniclingamerica.loc.gov/lccn/sn85029677/1900-07-05/ed-1/seq-3/>; "Help for Farmers: Western States Organizing to Secure Harvest Hands," *The Topeka State Journal* (Topeka, KS), 4/15/1904, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1904-04-15/ed-1/seq-10/>; "News Briefly Told," *The Loup Northwestern* (Loup City, NE), 6/3/1915, <https://chroniclingamerica.loc.gov/lccn/2018270203/1915-06-03/ed-1/seq-2/>; "Kansas Needs 5,000 'Hands'" and "Needs no Harvest Hands," *The Hays Free Press* (Hays,

overwhelmingly American-born and predominantly white. However, many were married and had permanent jobs, only coming out to the Plains for the summer.⁹ The category of “harvest hands,” in other words, heavily overlapped with the permanently migratory hobos, but many were not—and actively distanced themselves from hobos—while plenty of hobos never worked the harvest. Nevertheless, the bulk of harvest work was undoubtedly undertaken by hobos, and the bulk of hobos appear to have worked the harvest.¹⁰

The wheat harvest has drawn considerable attention from historians of hobos and the Great Plains alike. Frank Higbie, Carlos Schwantes, and Mark Wyman show that hobos were crucial figures in the wheat harvest, their temporary work indispensable to making it function.¹¹ Nigel Sellars and Greg Hall note that these workers were early forerunners of agricultural unionization.¹² Cindy Hahamovitch, meanwhile, cites Great Plains farming as the earliest major example of migratory agricultural work.¹³ However, these historians have

KS), June 9, 1917, <https://chroniclingamerica.loc.gov/lccn/sn84029690/1917-06-09/ed-1/seq-7/>; "Need 120,000 Men," *The Topeka State Journal* (Topeka, KS), 4/16/1919, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1919-04-16/ed-1/seq-1/>; "Need 50,000 Men," *The Topeka State Journal* (Topeka, KS), June 2, 1920, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1920-06-02/ed-1/seq-7/>; at least one other estimate puts the total at 250,000 total for the entire Plains: "'White Cross' Workers Friend," *The Herald-Advance* (Milbank, SD), 4/16/1920. <https://chroniclingamerica.loc.gov/lccn/sn00065154/1920-04-16/ed-1/seq-7/>.

⁹ Don Lescohier, *Sources of Supply and Conditions of Employment of Harvest Labor in the Wheat Belt*, USDA Bulletin 1211, (Washington, D.C.: Government Printing Office, 1924), pp. 1-10.

¹⁰ Lescohier's estimates work with the data given by free employment bureaus regarding workers they placed—a self-selecting group who used these official channels to circumvent the informal networks of labor negotiation that other migrants used to find placement in the harvest fields. Work as a harvest hand was one of the most frequent jobs a hobo might undertake; see Nels Anderson, *On Hobos and Homelessness*, Raffaele Rauty, ed. (Chicago: University of Chicago Press, 1998), pp. 65, 85-6.

¹¹ Frank Higbie, *Indispensable Outcasts: Hobo Workers and Community in the American Midwest, 1880-1930* (Urbana, Illinois: University of Illinois Press, 2003); Carlos Schwantes, *Hard Traveling: A Portrait of Work Life in the New Northwest* (Lincoln, Nebraska: University of Nebraska Press, 1994); Mark Wyman, *Hoboes: Bindlestiffs, Fruit Tramps, and the Harvesting of the West* (New York: Macmillan, 2010).

¹² Nigel Anthony Sellars, *Oil, Wheat, and Wobblies: The Industrial Workers of the World in Oklahoma, 1905-1930* (Norman, Oklahoma: Oklahoma University Press, 2012); Greg Hall, *Harvest Wobblies: The Industrial Workers of the World and Agricultural Laborers in the American West, 1905-1930* (Corvallis, Oregon: Oregon State University Press, 2001).

¹³ Hahamovitch, *Fruits of Their Labors*, pp. 14-38.

given little attention to the particularities of Great Plains environments.¹⁴ Inversely, Western environmental historians have largely overlooked hobos in their analysis. William Cronon's exploration of wheat details the ways that the process of making wheat into an industrial product insulated the consumer entirely from the production process, but focuses more or less exclusively on farmers rather than their laborers.¹⁵ Economic historian Gavin Wright mostly regards the hobo as an outlier in a story of the death of a nascent American agricultural proletariat at the hands of mechanization.¹⁶ Sterling Evans's work on transnational connections between wheat and Mexican farmers growing sisal for binder twine leaves little room for those working with the twine at the other end.¹⁷ And while Thomas Isern's *Bull Threshers and Bindlestiffs* brings together the Plains, the harvest, and hobos, Isern's analysis understates significant historical changes over the course of the nineteenth and twentieth centuries—changes that I argue were environmentally driven.¹⁸ By bringing together strands of labor and environmental history with extensive climatological and digitized records, this chapter aims to provide a much more comprehensive analysis of how climate shaped the wheat harvest.

I begin by exploring the biological dimensions of wheat plants, the way they shaped a political ecology distinctive to the Great Plains, and the role of the hobo in this political ecology in the years after the Civil War. Then, I turn to the greatest environmental challenge

¹⁴ Hahamovitch's book does argue that it is the exaggerated labor demands of harvests that cause a demand for migrant workers, but does not allow for environmental differences between regions.

¹⁵ William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton & Co., 1991).

¹⁶ Gavin Wright, "American Agriculture and the Labor Market: What Happened to Proletarianization?" Wright, Gavin. "American Agriculture and the Labor Market: What Happened to Proletarianization?" *Agricultural History* 62, no. 3 (Summer, 1988).

¹⁷ Sterling Evans, *Bound in Twine: The History and Ecology of the Henequen-Wheat Complex for Mexico and the American and Canadian Plains, 1880-1950* (College Station, Texas: Texas A&M University Press, 2013).

¹⁸ Thomas D. Isern, *Bull Threshers and Bindlestiffs: Harvesting and Threshing on the North American Plains*, (Lawrence, Kansas: University Press of Kansas, 1990).

the hobo work regime faced in its early history—the drought of the 1890s—to show how hobos operated as the perfect adaptation to environmental variability. Finally, I turn to the continuation of the work regime into the early twentieth century, examining which aspects of the system persisted and which ones evolved, as well as the increasingly embittered labor relations in the wake of the ruinous drought.

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On the Ecology of a Grain Field

The wheat fields of the Great Plains were and are the product of a ten-thousand-year partnership between a grass plant (originally from the Middle East) and hominids (originally from East Africa) to increase the odds of survival of each. In exchange for humans preserving, distributing, and planting its seeds at the optimal depth year after year, the wheat plant offers a protein-rich and calorie-dense cluster of seeds, which can be ground into a fine, powdery flour and baked into bread. Both species have leveraged this partnership to become some of the most successful organisms on the planet; neither one's near-term survival is in any doubt. By offloading work onto each other—protection and transportation to the human, and converting sunlight into stored energy to the wheat plant—each benefits enormously.¹⁹

But the actual mechanics and timing of this process get quite complex, quickly. In contemporary life, with supplies of flour and bread essentially unlimited year round, it is difficult to appreciate exactly how narrow the tolerances for agriculture often are. Wheat can only grow in a limited set of climates in the temperate zone of the planet. It does not tolerate moisture well, but it also requires, on average, at least 20 inches of rain a year—ideally,

¹⁹ James Scott, *Against the Grain: A Deep History of the Earliest States* (New Haven: Yale University Press, 2017), pp. 37-58.

spaced out fairly evenly through the growing season.²⁰ To store calories in the form of seeds, it requires consistent sunlight, and needs to extract elements from its environment: carbon and oxygen from the air, and a whole suite of much harder-to-get elements—especially nitrogen and phosphorous—from the soil.²¹ Wheat is, put bluntly, an especially greedy plant in this regard: completely healthy soils can be entirely ruined after only a few years of wheat planting, their nitrogen and phosphorous entirely vanished into food calories.²² Soil, it should be noted here, is a living assemblage of organisms—it lives and breathes partially independently of whatever is planted in it; farming takes that diverse ecology and steers its energies into feeding one plant. In other words, wheat’s place in ecology is an extractive one—indeed, it is a plant that forms an extractive partnership with human beings.

In the United States, this extraction manifested as a westward advance alongside white settler colonists. Wheat was planted at the western edge of northern white conquest, exhausted the soils, and then was planted again, farther west. The soils at the very edge of newly conquered lands were enriched by centuries of careful Indigenous horticulture. This settler colonial bounty ensured that wheat planted at these western fringes grew incredibly well. From the seventeenth century onward, new areas became unbelievably fertile wheat-growing regions in turn: the Eastern Seaboard, then northern New York, then the Ohio River Valley, then Illinois and Iowa, and finally, the Great Plains.²³ Every westward conquest brought new soils ripe for extraction by settler colonists and their wheat plant allies.

²⁰ Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (New York: Oxford UP, 1979), p. 71.

²¹ On agriculture’s relationship with nitrogen and phosphorous, see Edward Melillo, *Strangers on Familiar Soil: Rediscovering the Chile-California Connection* (New Haven, Connecticut: Yale University Press, 2015).

²² Steven Stoll, *Larding the Lean Earth: Soil and Society in Nineteenth Century America* (New York: MacMillan, 2002); see also Brian Donahue, *The Great Meadow: Farmers and the Land in Colonial Concord* (New Haven, Connecticut: Yale UP, 2007).

²³ On the movement into the Ohio River Valley, see Joyce Appleby, *Capitalism and a New Social Order: The Republican Vision of the 1790s* (New York: New York University Press, 1984); On the Great Plains, see Cronon,

But even in this context, the conquest of the Great Plains brought the wheat frontier in contact with a radically new environment. A wildly variable climate and a resilient grasslands ecology (with prairie root systems that resisted conventional plows) made life difficult for new shoots. Settlers used new plows to break the prairie sod, and brought biotechnologies to resist drought. “Turkish Red” wheat, imported from Crimea in the 1870s, and Marquis wheat, hybridized by a Canadian chemist in the 1890s, were both drought tolerant and high yield. Hundreds of other varieties cropped up across the United States, some of them emerging from rogue wheat plants self-hybridizing in rural fields, each being planted to adapt to extremely specific environmental and climatological conditions. But Turkish Red and Marquis reigned supreme: dominating the Great Plains, they made up nearly half the total acreage of wheat sown nationally in 1920.²⁴

Moreover, wheat fields on the Great Plains looked very little like their counterparts farther east. Vast, flat, and seemingly featureless, the Plains lent themselves to incredibly vast, square fields, proliferating seemingly without constraint by topography. In New England or New York, or even Ohio, fields were carved out of woodlands, bounded most often by ravine or ridge. On the Great Plains, grass for wheat was an easy substitution that involved little earth moving. The geography of the Plains itself facilitated hyper-rational modes of agriculture, organized by no logic other than pure capitalism.²⁵

Nature's Metropolis and Worster, *Dust Bowl*; on the American West more broadly, see Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* (Seattle: University of Washington Press, 1999).

²⁴ Acreage figures come from both the *Fourteenth Census of the United States: Vol. 5: Agriculture* (Washington, D.C.: Government Printing Office, 1922) and the USDA bulletin, J. Allen Clark, *Classification of American Wheat Varieties* (Washington, D.C.: Government Printing Office, 1922); for the history of these varieties, see the latter, as well as David Moon, “In the Russians’ Steppes: The Introduction of Russian Wheat on the Great Plains of the United States of America,” *Journal of Global History* 3 (2008).

²⁵ See Cronon, Fiege, and Worster, but especially Kate Brown, “Gridded Lives: Why Kazakhstan and Montana Are Nearly the Same Place,” *The American Historical Review* 106, no. 1 (February 2001).

Sowing wheat decimated a ten-thousand-year-old ecology. Prairies gave way to acre upon acre of wheat. Indigenous mammals and birds survived primarily in the borders between fields, where shrubs and trees grew up over the decades.²⁶ Larger mammals were slaughtered by rifle and habitat destruction.²⁷ The suppression of prairie fires brought trees back to the Plains, while the constant upturn of soils destroyed insect populations and made the most successful plants weeds like ragweed, much to the consternation of allergic humans across the continent.²⁸ The wheat field had become a biome unto itself, reaching across millions of acres.

Wheat agriculture had become the apotheosis of monoculture. “Monoculture,” the practice of planting only one kind of crop in a field (as opposed to cultivating many plants side-by-side), was more or less the only way one could grow wheat effectively. But the Great Plains wheat fields wildly exaggerated this practice. Early Modern wheat farmers—like their ancient predecessors—grew small fields of wheat along with dozens of other kinds of crops, relying on diversity to ensure survival. The more crops one had, the more resilient the field, as pests, blights, or climatic conditions that killed wheat might not kill barley or oats.²⁹ While

²⁶ Donald Kaufman and Glennis Kaufman, “Wildlife Management in Central Kansas: Implications of Small Mammal Use of Fencerows, Fields, and Prairie,” *Transactions of the Kansas Academy of Science* 92, no. 3/4 (1989); Donald Kaufman and Glennis Kaufman, “Small Mammals of Wheat Fields and Fallow Wheat Fields in North-Central Kansas,” *Transactions of the Kansas Academy of Science* 93, no. 1/2 (1990); Bryan R. Coppedge David M. Engle Ronald E. Masters Mark S. Gregory, “Avian Response to Landscape Change in Fragmented Southern Great Plains Grasslands,” *Ecological Applications* 11, no. 1 (February 2001).

²⁷ Dan Flores, *American Serengeti: The Last Big Animals of the Great Plains* (Lawrence, Kansas: University Press of Kansas, 2016).

²⁸ On the suppression of prairie fire, see Julie Courtwright, *Prairie Fire: A Great Plains History* (Lawrence, Kansas: University Press of Kansas, 2011); on pollen counts, see Fred B. Samson, Fritz L. Knopf, and Wayne Ostlie, “Great Plains Ecosystems: Past, Present, and Future,” (2004), *USGS Staff—Published Research* 45 (2004). Accessed 8/1/2020, <https://digitalcommons.unl.edu/usgsstaffpub/45>; Stephen Hall, (1994) “Modern Pollen Influx in Tallgrass and Shortgrass Prairies, Southern Great Plains, USA,” *Grana* 33 no. 6 (1994); Herbert Wright Jr., Ivanka Stefanova, Jian Tian, Thomas Brown, Feng Sheng Hu, “A chronological framework for the Holocene vegetational history of central Minnesota: the Steel Lake pollen record,” *Quaternary Science Reviews* 23, no. 5–6, (March 2004), Arthur Dyke, “Late Quaternary Vegetation History of Northern North America Based on Pollen, Macrofossil, and Faunal Remains,” *Géographie physique et Quaternaire* 59, no. 2–3 (2005).

²⁹ This kind of agriculture is explored in depth in Donahue, *The Great Meadow*.

the Great Plains did not entirely eliminate diversity in fields, it came close. Great Plains farmers grew wheat for market, not for subsistence; they would eat their own wheat, but largely relied on others to supply most of their needs. Market pressures of cash crops meant that fields on the Great Plains were overwhelmingly one type of grain per region—pressures that only intensified as time continued.³⁰

The clearest pressure on a grain harvest, however, was the climate. The grasslands climate was notoriously fickle—enough to send settler society into crisis. The magnitude of these disasters is visible in the chart below. By juxtaposing reconstructed precipitation numbers with the harvests, we can see that the former held the latter hostage. While continuing settlement meant the overall trend was upwards, grain harvests in the west could fall by more than a third from year to year, as they did from 1889 to 1890; these losses were clearly correlated with the occurrence of drought, both in contemporary reports and in modern reconstructions. Such plummets happened at least once every five years between 1870 and 1890, the same period when the hobo work regime rose. In short, a region-wide failed harvest was a frequent occurrence. To see the impact this had on hobos, we must turn to harvest work—which was itself the product of pure muscle.

³⁰ Cronon, *Nature's Metropolis*, pp. 23-147.

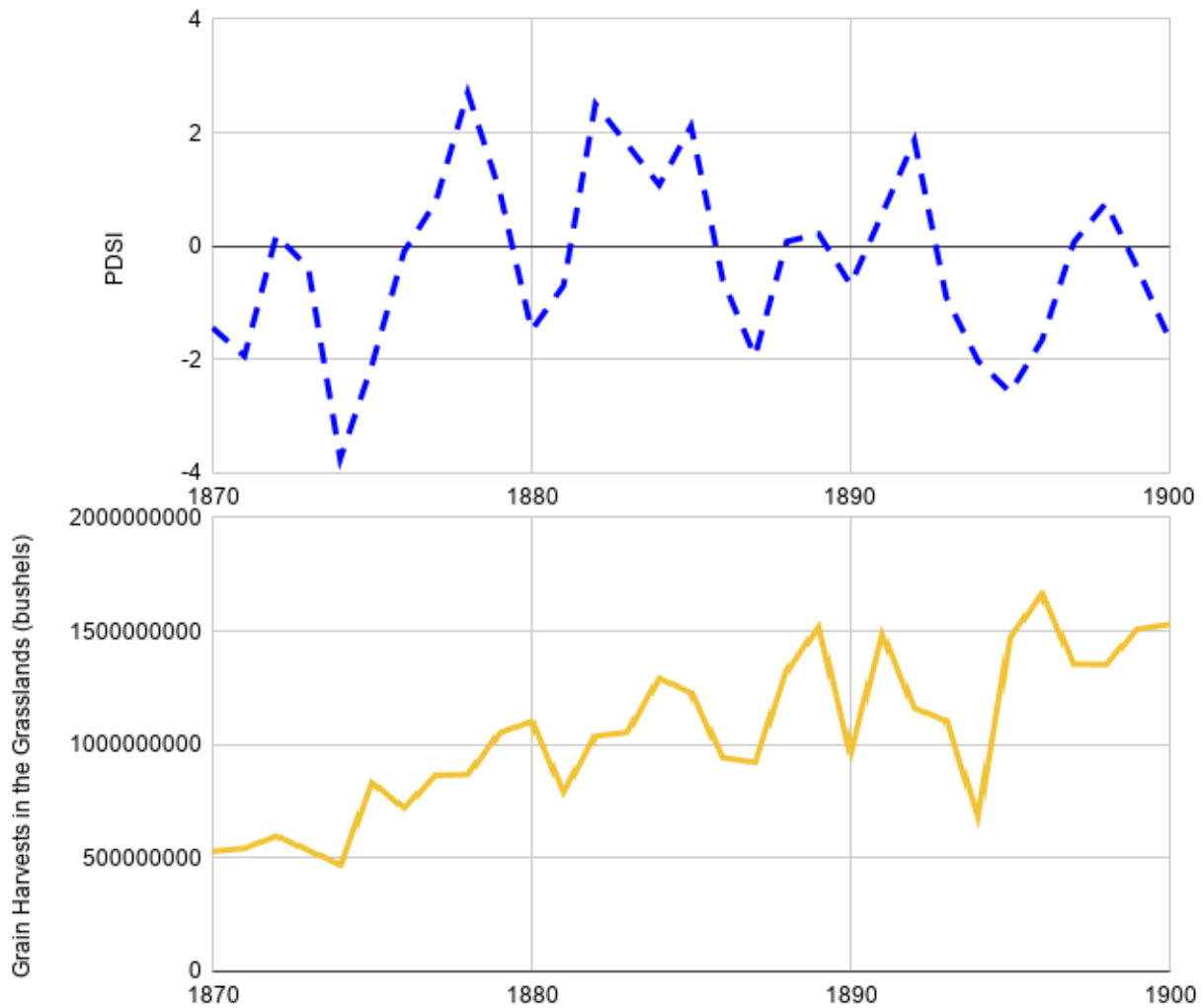


Figure 4. Chart: Precipitation and Harvest in the Grasslands. PDSI, short for “Palmer Drought Severity Index,” is a metric for how severely precipitation has influenced plant growth in a given year. For this graph, PDSI has been averaged across 25 different data points in the “grasslands” region. Note the impact of the 1890s drought. SOURCE: image by author.³¹

³¹ Harvest data has been sourced from United States Department of Agriculture, *Report to the Secretary of Agriculture* (Washington, D.C.: Government Printing Office, years 1870-1900). I define the “grasslands” in my introduction; for this chart, data is taken from Illinois, Iowa, Minnesota, Kansas, Nebraska, the Dakotas, Colorado, and Montana. PDSI has been sourced from Cook and Krusic, “The North American Drought Atlas,” *Lamont-Doherty Earth Observatory* and the *National Science Foundation*, 2004, <http://iridl.ldeo.columbia.edu/SOURCES/.LDEO/.TRL/.NADA2004/.pdsi-atlas.html>. The 25 data points used are those in this data set labeled 143-147, 159-163, 174-178, 189-192, 199-201, and 208-210, corresponding to this definition of the grasslands. While PDSI values of +/- 10 are possible, they are astronomically unlikely when aggregating across regions as this data does (as even the worst droughts are usually less severe in some areas). -2 is considered a moderate drought, -3 a severe drought, and -4 an extreme drought. Canadian precipitation data, though available, has been excluded, as harvests in this period were still negligible.

Indeed, agriculture was industrialized and mechanized long before it was demuscle. The late nineteenth century farm scaled up operations by breaking tasks down into increasingly distinct pieces and partly automating them. Reaping switched from scythes to dedicated machines, as did threshing, binding, and various other processes.³² While this trend was most visible on big farms like the “bonanza farms” of North Dakota (which farmed wheat across thousands of acres on newly colonized ground), it was also true of quite small family farms in the prairies and plains.³³ Yet all of the mechanical devices required muscle power—horses to draw the reapers and combines; human hands to direct the animals and operate machinery like threshers and binders.³⁴ These tasks required increasingly discrete bits of skill, and while farmers might opt for harvest hands who already had the “knack” for certain tasks, it didn’t take long to get anyone up to speed.³⁵ Farming had come to rely on cheap, interchangeable workers.

Agriculture’s exclusive use of muscle power was nothing new—from an energy perspective, agricultural work would remain virtually unchanged between colonial times and the 1920s, only using animals and humans. In colonial and Antebellum America, however, when work demands ballooned during the harvest time, a farmer would simply hire or beg their neighbors to come work in their fields—even those who weren’t professional farmers.³⁶ But settlers lived far less densely on the grasslands. Simply put, there *weren’t enough neighbors* to meet harvest demands. The population density of a typical

³² Sterling Evans, *Bound in Twine: The History and Ecology of the Henequen-Wheat Complex for Mexico and the American and Canadian Plains, 1880-1950* (College Station, Texas: Texas A&M University Press, 2007), pp. 1-3.

³³ Deborah Fitzgerald, *Every Farm a Factory: The Industrial Ideal in American Agriculture*, (New Haven, Connecticut: Yale University Press, 2003), pp. 15-16.

³⁴ Evans, *Bound in Twine*, pp. 4-7.

³⁵ Anderson, *The American Hobo*, p. 98.

³⁶ Schob, *Hired Hands and Plow Boys*.

western agricultural state—Kansas—was less than 20% of one like Ohio in 1890.³⁷ Farms grew larger to pad against potential losses from drought—indeed, the size of homesteads was expanded for exactly this reason—but more fields required more muscle at the harvest all the same.³⁸ On the Great Plains and prairies, therefore, workers instead had to be hired from much farther away.

So they were, but the birth of the harvest hand was a gradual one. In the 1860s, the scant evidence for harvest hands suggests that they usually came from within their own state, hired from cities and towns to help local farmers.³⁹ The farthest farmers might range to hire these hands would be nearby Indian Reservations.⁴⁰ Over the course of the 1870s, “harvest hands” began to regularly appear from farther and farther afield in towns in Kansas, especially, and later on in Nebraska, the Dakotas, and Indian Territory (what would become Oklahoma). By the 1890s, it was clearly a national phenomenon, coupled with the general rise of “tramping,” with thousands of itinerant laborers migrating to the Great Plains to help in the harvest—a group that mostly reflected the composition of the hobo population more broadly. Many would begin in Kansas and work their way northward with the ripening grain, working in field after field before settling in with a threshing crew and working through the autumn. Others would work in a very circumscribed area before returning home.⁴¹

³⁷ *Report on Population of the United States at the Eleventh Census: 1890* (Washington, D.C.: Government Printing Office, 1895), p. xxxv.

³⁸ Reisner, *Cadillac Desert*, pp. 41-2.

³⁹ See newspaper stories such as: “The Real Gold Mines,” *White Cloud Kansas Chief* (White Cloud, KS), 9/12/1860, <https://chroniclingamerica.loc.gov/lccn/sn82015486/1860-09-13/ed-1/seq-2/>; “Thingamajigs,” *White Cloud Kansas Chief* (White Cloud, KS), 8/7/1862, <https://chroniclingamerica.loc.gov/lccn/sn82015486/1862-08-07/ed-1/seq-2/>; “Harvest Help,” *The Emporia News* (Emporia, KS), 6/16/1866, <https://chroniclingamerica.loc.gov/lccn/sn82016419/1866-06-16/ed-1/seq-3/>.

⁴⁰ “Town and Country,” *The Emporia News* (Emporia, KS), 7/23/1869, <https://chroniclingamerica.loc.gov/lccn/sn82016419/1869-07-23/ed-1/seq-3/>.

⁴¹ Isern, *Bull Threshers and Bindlestiffs*, pp. 136-7.

The organization of these harvest crews began as fairly egalitarian. Farmers—both owners and tenants alike—usually worked with their families right alongside harvest hands, except for the very largest farms. Hands often ate at the family dinner table, and though they slept in the barn or haystacks rather than the house, the wheat harvest was probably the kindest version of itinerant labor in this period—a true outlier—until the late 1890s.⁴²

FIG. 2.—Corn belt: Seasonal distribution of total labor on a 325-acre corn, small grain, timothy seed and hay farm, central Iowa.

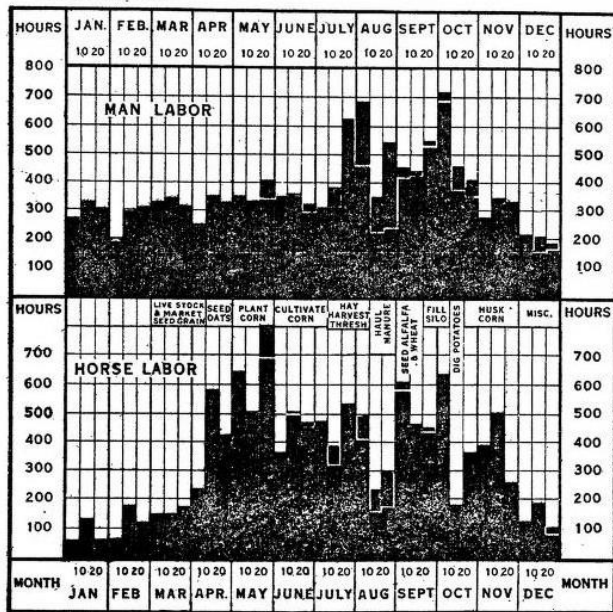


FIG. 5.—Spring wheat region: Seasonal distribution of total labor on a 600-acre grain farm, North Dakota.

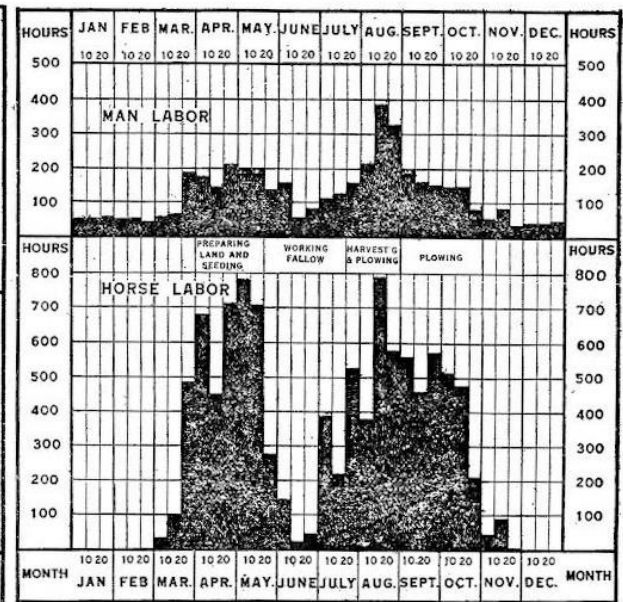


Figure 5. Chart: Hours of Labor on Wheat and Maize Farms, 1917. Note that the labor demands of a maize farm are quite uniform throughout a year, whereas the wheat farm has extremely concentrated demands for human labor around the time of the harvest. Other farms surveyed in the Yearbook had even higher contrasts, and on non-mechanized farms, demand could range as high as 20-30 times the “normal” during harvest. SOURCE: Yearbook of the United States Department of Agriculture, 1917 (Washington, D.C.: Government Printing Office, 1918), pp. 544-5.⁴³

No matter how it was organized, harvest work required multiple steps to get from intact grain plants to millable wheat kernels. In order, these were: 1) reaping—cutting grain stalks from the ground; 2) either binding and shocking, or heading—each a process of

⁴² Wright, “American Agriculture and the Labor Market,” p. 196.

⁴³ Found in Wright, “American Agriculture and the Labor Market,” p. 205.

gathering the cut stalks into larger piles fit for handling in bulk; 3) winnowing—separating the wheat from the chaff; and 4) threshing—putting wheat and chaff into separate piles. Each of these came with their own skills and labors. Reaping was usually done by a horse-drawn reaper, requiring a driver and several rakers to keep the reaper clean. Binding involved the laborious process of tying knots, first in metal wire and later in twine, while shocking and heading were two distinct arts of stacking grain—each suited for slightly different weather conditions. Winnowing and threshing generally lasted for two months after the harvest, shifting stacks into steam-powered or horse-driven threshers.⁴⁴ Each of these specific labor forms were intimately intertwined with the biology of the wheat plant—other grains, like maize, never required nearly as many steps or as much labor to get from plant to edible food.

After the harvest, many stayed on to work with threshing crews. Threshing machines could be big, bulky, and powerful, as they only had to be moved into one place before separating one pile into two—the rare purpose on the Great Plains, outside of a railroad, where a steam engine was appropriate. As they were massive, bulky, and expensive, very few farms owned their own. Outside threshing companies were usually contracted by groups of farmers, who supplied their own hands to stay on and work the two-month threshing period. On most farms, then, harvest hands only slowly drifted away from the harvest, with occasional reports of them leaving as late as November or December.⁴⁵

⁴⁴ Isern, *Bull Threshers and Bindlestiffs*, pp. 71-5. For binding, see also Evans, *Bound in Twine*.

⁴⁵ Isern, *Bull Threshers and Bindlestiffs*, pp. 74-5.

HARVEST HANDS ARE SCARCE



Figure 6. Image: Ellsworth Young, "Harvest Hands Are Scarce," SOURCE: Chickasha Daily Express (Chickasa, OK), 8/16/1912, p. 1.

All of this led to a sometimes stupendous demand for harvest workers. At the height of the harvest hand, farmers would meet incoming trains and hire hobos as they stepped off, shouting bids of higher and higher wages if they had to—a bizarre sight corroborated in several sources.⁴⁶ Women often engaged in the harvest, much to the perennial surprise of

⁴⁶ Nels Anderson, *The American Hobo: An Autobiography* (Leiden, Netherlands: E. J. Brill, 1975), p. 98; Untitled, *The Goodland Republic* (Goodland, KS), 7/8/1892, <https://chroniclingamerica.loc.gov/lccn/sn85030821/1892-07-08/ed-1/seq-4/>; "Farmers Meet All Trains,"

male newspaper writers. Frequently, however, the harvest was borderline absurd—indeed, it is hard to parse where the line was between truth and hyperbole: farmers chasing down hobos with shotguns and press-ganging them into work crews; farmers locking men into a train and hiring armed guards to ensure they weren't hired at points in between; a salesman stepping off the train, getting his hand shaken warmly by a dozen different men, before informing them that he wasn't a harvest hand, and subsequently getting lynched; and an earthquake that turned out to be a stampede of farmers going to the nearest train.⁴⁷ One cartoon, reproduced above, depicts a farmer lassoing an unsuspecting bystander to force them into work.

Harvest hands could expect a very different reception in bad years, however. Many found themselves milling about an unfriendly town among the crowds, seeking work that simply did not exist. Some found themselves in this situation even when going to a job supposedly lined up for them—even those given out by state employment agencies.⁴⁸ Itinerant workers who did not find work would end up, at best, sleeping in parks by the thousands alongside the local homeless population.⁴⁹ They were mostly “penniless,” and “return[ed] to the east in a worse financial condition than they were before they came.”⁵⁰

Evening Times-Republican (Marshalltown, IA), 7/3/1903, <https://chroniclingamerica.loc.gov/lccn/sn85049554/1903-07-03/ed-1/seq-8/>; “Search the Trains,” *The Topeka State Journal* (Topeka, KS), 7/6/1903, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1903-07-06/ed-1/seq-1/>.

⁴⁷ “Harvesting a Science Now,” *The Daily Ardmoreite* (Ardmore, OK), 7/20/1909, <https://chroniclingamerica.loc.gov/lccn/sn85042303/1909-07-20/ed-1/seq-3/>; “The Troubles of the Kansas Wheat Raiser,” *Baxter Springs News* (Baxter Springs, KS), 7/25/1919, <https://chroniclingamerica.loc.gov/lccn/sn83040592/1919-07-25/ed-1/seq-4/>.

⁴⁸ Untitled, *The Topeka State Journal* (Topeka, KS), 7/17/1902, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1902-07-17/ed-1/seq-8/>.

⁴⁹ “Snap Shots,” *The Topeka State Journal* (Topeka, KS), 6/16/1915, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1915-06-16/ed-1/seq-4/>.

⁵⁰ “Easterners Misunderstand Kansas Harvest Condition,” *Abilene Weekly Reflector*, (Abilene, KS), 7/3/1913, <https://chroniclingamerica.loc.gov/lccn/sn84029386/1913-07-03/ed-1/seq-9/>. See also “Too Many Men,” *The Madison Daily Leader* (Madison, SD), 8/14/1896,

Most begged for food, having to go door to door, and were consequently cast as a menace to society.⁵¹ In these cases, they could expect to find police waiting for them—indeed, waiting for the slightest signal of idleness.⁵² One representative police chief, from Guthrie, Oklahoma, was quoted as saying, “A city is no place for harvest hands.”⁵³ In short, the Great Plains was a place of wildly unpredictable work demands—and one where the desired laborer would be met with a handshake and a bidding war, and the surplus laborer would be met not just completely without a job—but with a policeman’s billy club, to boot.

The hobo work regime met these variable harvest demands with flexibility and dynamism. Their work is traceable not by any kind of systematic reporting of contracts or wages, but by their appearance in contemporary local papers. Newspapers on the Great Plains regularly reported on the arrival and departure of “harvest hands” along with “tramps” and “hobos;” they noted when farmers came into town looking for workers, when there were crowds of unemployed would-be harvest hands, and when there were none to be found. The resulting journalistic record traces not only the dynamics of hobo employment in

<https://chroniclingamerica.loc.gov/lccn/sn99062034/1896-08-14/ed-1/seq-1/>, as well as first-hand testimony from interview with Joseph Burke, *U.S. Commission on Industrial Relations, 1912-1915: Unpublished Records of the Division of Research and Investigation: Reports, Staff Studies, and Background Research Materials*, microfilm collection, reel 6.

⁵¹ "State News," *Bismarck Tribune* (Bismarck, ND), 7/19/1895, <https://chroniclingamerica.loc.gov/lccn/sn85042588/1895-07-19/ed-1/seq-3/>; "Jamestown: City and Vicinity," *Jamestown Weekly Alert* (Jamestown, ND), 7/25/1895, <https://chroniclingamerica.loc.gov/lccn/sn85042405/1895-07-25/ed-1/seq-7/>; "New Harvest Hand Problem," *The Topeka State Journal* (Topeka, KS), 6/3/1915, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1915-06-03/ed-1/seq-4/>; "Race of Men That Don't Fit in the Kansas Menace," *The Topeka State Journal* (Topeka, KS), 7/15/1916, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1916-07-15/ed-1/seq-15/>.

⁵² "Annual Influx of Hoboes Bound for Harvest Fields Causing Police Trouble," *The Alliance Herald* (Alliance, NE), 7/12/1921, C. A., <https://chroniclingamerica.loc.gov/lccn/2010270501/1921-07-12/ed-1/seq-2/>.

⁵³ "'Harvest Hands,' Boys and Bums, Hit Town," *The Guthrie Daily Leader* (Guthrie, OK), 6/16/1915, <https://chroniclingamerica.loc.gov/lccn/sn86063952/1915-06-16/ed-1/seq-1/>.

the harvests, but how the effects of a good or bad harvest manifested directly in the lives of these workers.

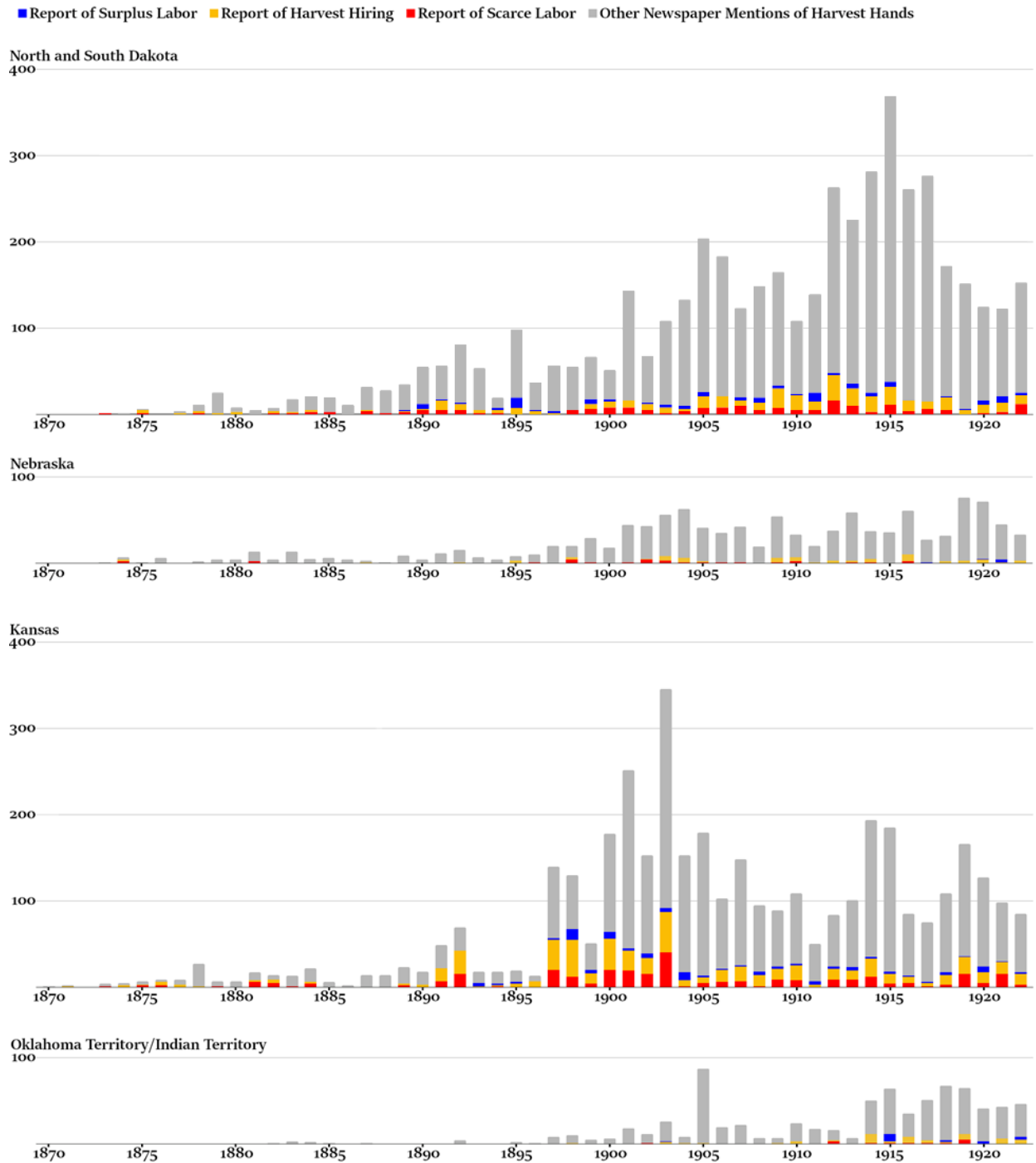


Figure 7. Chart: Reports of Harvest Hands by Year, 1870-1920. SOURCE: image by author.⁵⁴

⁵⁴ All instances where the words “harvest” and “hands” (or common permutations like “harvested,” “harvesting,” “hand,” etc.) occurred within ten words of each other in Kansas newspapers in the Library of



Figure 8. Chart: Reports of Harvest Hands by Month, 1870-1920. SOURCE: image by

Congress database are displayed. Mentions are categorized as either simple “hiring notices,” “scarcity of harvest hands,” “surplus of harvest hands,” or “other.” Only reports on current conditions were included; this does not count the numerous speculations in springtime that the number of harvest hands would be low or high based on projections of the crop, nor retrospectives written in late fall and winter summarizing the supply of harvest hands for the previous season. Hiring notices include both “help wanted” advertisements and reports of farmers recruiting. Scarcity only includes direct reports of scarcity, rather than circumstantial evidence like high wages. Surplus includes only mentions of harvest hands looking for work but going idle, but does include newspaper reports that mention “tramps” or “hobos” and opine that their attempts to seek work are a sham—even the most skeptical reading of hobo narratives and accounts suggests that these efforts were usually in earnest. In the category of “other” were included reports of hands arriving and leaving (including incidental reports), but also various reports of harvest hands dying, becoming injured in accidents, getting arrested for disorderly conduct, drunkenness, getting robbed, getting in fights, going on strike, , etc., as well as various “false positives” that included the phrase “the harvest is at hand,” jokes, or ironic references to newborn children on the farm as “new harvest hands.” Frequently, newspapers in the nineteenth century reprinted material from other newspapers, with or without attribution; in these cases of duplicate reports, they were only counted the initial time they appeared.

*author.*⁵⁵

These charts represent over ten thousand mentions of harvest hands in contemporary Great Plains newspapers—and immediately paint a highly suggestive portrait of harvest work. Even without knowing exact climatic data, we can pinpoint bad years. Droughts in the mid-1880s and mid-1890s are instantly visible, as job advertisements plummeted in with poor harvests. Regional droughts in the Northern Plains are visible in the early 1920s. Reports of surplus laborers milling about in town or looking for work ballooned in the worst years, and gave way to panic over labor scarcity in good years. Even a cursory reading, in other words, shows how profoundly precarious harvest work could be. But though this confirmation of hobo precarity is useful for our purposes, much more can be gleaned from these reports.

First, it is useful to note when and how farmers hired, relative to their actual labor needs. In Kansas, the first hires always came well in advance of the actual harvest, usually by May, sometimes in April, and once even in March. These hires came well in advance of the earliest harvest hands, suggesting that the most precocious farmers arranged for help from neighbors and those living in adjacent towns.⁵⁶ Farmers then inevitably supplemented these early arrangements immediately before or during the harvest, in June and July. Such summer hires happened during the arrival of the harvest hands themselves. Farther north, the same story was true. In Nebraska, early hires were rare, and virtually all hiring took place right as the harvest started. The Dakotas looked much like Kansas, but two months later—early hires

⁵⁵ See the footnote immediately above for various criteria for categorization. On occasion, newspaper stories mentioned violent or amusing incidents occurring to harvest hands arriving or leaving on the train or stopping over in a town; where possible, these were also used to help gauge their arrival and departure.

⁵⁶ Lescohier, *Sources of Supply and Conditions of Employment*, indicates that many hires were from local Kansas towns, as does Isern, *Bull Threshers and Bindlestiffs*.

in June and July, full blown harvest in August, and hands lingering on until December. In other words, employment was ad hoc and on demand; harvest hands arrived with no guarantee of a job, and farmers hired at the last possible moment to gather their crops.

Second, the timing of the reports of surplus or scarce labor are even more striking. Surplus and scarcity could not be predicted in advance, though many tried—actual reports of surplus and scarcity peaked with the harvest and the arrival of the harvest hand. Harvest hands arrived—and only then discovered that there were not enough jobs. Other areas might discover that there were not enough harvest hands, but it was already nearly too late. Hiring ads, scarcity, and surplus, all had their own rhythm depending on the year. Early arrangements for hiring came in before the crop conditions could even be remotely known. In a good year, job ads then accelerated, and scarcity gradually became apparent; in a bad year, they fell away and dwindled to nothing, alongside reports of surplus laborers. And even in some fairly poor years, reports of labor scarcity could come from various points around the Plains—note how even the catastrophic harvest of 1894 generated a report of labor scarcity—indicating how the climate could be inconsistent from place to place.⁵⁷ (Newspapers reports often noted this directly.⁵⁸) In the worst cases, wheat was left uncut, or crowds of laborers stood around without work. Farmers surely suffered losses in these cases,

⁵⁷ This came from western Kansas—see the *Goodland Republic*, July 13, 1894.

⁵⁸ “[A]n Emmons county farmer was in town one day recently to meet some harvest hands from South Dakota who were looking for work, there being no crop in the locality from which they came. [...] One can drive north from Linton for twenty miles and fields can be seen within a few rods of each other that will vary almost double in producing qualities,” Untitled, *Emmons County Record* (Williamsport, ND), 7/31/1913, <https://chroniclingamerica.loc.gov/lccn/sn87096040/1913-07-31/ed-1/seq-4/>. See also “Harvest Help,” *The Fargo Forum and Daily Republican* (Fargo, ND), 7/18/1911, <https://chroniclingamerica.loc.gov/lccn/sn85042224/1911-07-18/ed-1/seq-4/>. “Harvest Begun in No. Dakota; Yield Spotted,” *The Bismarck Tribune* (Bismarck, ND), 7/16/1921, <https://chroniclingamerica.loc.gov/lccn/sn85042243/1921-07-16/ed-1/seq-1/>.

but harvest hands might have journeyed all the way out to the West and earned not a cent in wages to show for it. It was the laborers who bore the brunt of difficult years.

Third, the timing of departing harvest hands carried a ragged, long tail. Though hobos (by necessity) usually arrived within a week of the harvest, they left in dribs and drabs over the succeeding months. Some left directly after the harvest, either to find new employment farther north with the ripening band of crops, or, surely, to return home, their wanderlust sated and a hundred dollars in their pockets. But stories about harvest hands on their return journey surface well past harvest time: up to four months after the crop was finished. These stragglers likely had stayed on with threshing crews—demonstrating that lucky hobos could find work for the entire season.

To see how these patterns might play out in different years, let us focus on two successive harvests: those of 1892 and 1893. 1892, the last year before a colossal, multi-year drought, can be taken as indicative of how the hobo work regime might function in a good year; 1893 reveals its dark mirror—the hobo work regime in a year when hobos weren't wanted at all. By juxtaposing newspaper accounts with climatic data and by tracing how hobos moved through these harvests and what kinds of work conditions they found, we can reveal the effects of climate on migrant workers.

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A Tale of Two Years

The key to the 1892 job market was atmospheric pressure. This was the story told by weather maps, released daily by the United States Department of Agriculture. Atmospheric lows passed west to east, squeezing the moisture out of the air; rain fell in gentle, repeated thunderstorms. Hail was rare. So, too, were floods. Instead, the wheat of the West soaked up

the moisture greedily, growing tall and green. Farmers reported these crops to their local weather stations, who relayed the information by telegraph to the nation's capital along with information on rain, winds, and storms. In short: conditions were perfect, and everybody knew it.⁵⁹

As it happened, these conditions continued to and through the harvest. Today, tree ring records show 1892 to be an unusually good year for the Great Plains in the midst of an awful decade—something farmers and meteorologists alike had very little reason to suspect. While 1890 had been a difficult harvest, particularly in the Dakotas, and farmers in the northern Plains had required food aid and state relief, 1891 had brought a record harvest across every state in the region.⁶⁰ 1892 brought even better conditions: not a single part of the entire Great Plains had anything but above-average rainfall.⁶¹

As early as February—five months before the harvest—Kansas farmers were anticipating huge returns; one local said “the rain raised the price of harvest hands 25 cents, and the snow 50 cents” more.⁶² By the second week in March, farmers had started to inquire after local harvest hands—seeking city boys to contract to come out to take in their wheat. In the Twin Cities, employment agents were already recruiting for the Dakota harvests—five months in advance. Wages, both groups expected, would be the highest ever.⁶³ By May, it had

⁵⁹ Conditions taken from the daily weather maps produced by the national weather service, archived by the NOAA: National Ocean and Atmospheric Administration, “Daily Weather Maps,” *National Climatic Data Center*, 2020, https://www.ncdc.noaa.gov/EdadsV2/library/DAILY_WEATHER_MAPS.

⁶⁰ On the 1890 drought, see Kevin Sweeney, *Prelude to the Dust Bowl: Drought in the Nineteenth-Century Southern Plains* (Norman, Oklahoma: OU Press, 2016). For the relative size of the harvests, see the *Report to the Secretary of Agriculture for the Year 1892* (Washington, D.C.: Government Printing Office, 1893).

⁶¹ See again Cook and Krusic, “The North American Drought Atlas.”

⁶² “Local Comment,” *Barton County Democrat* (Great Bend, KS), 2/25/1892, <https://chroniclingamerica.loc.gov/lccn/sn83040198/1892-02-25/ed-1/seq-5/>.

⁶³ “Neighborhood Happenings,” *Barton County Democrat* (Great Bend, KS), 3/10/1892, <https://chroniclingamerica.loc.gov/lccn/sn83040198/1892-03-10/ed-1/seq-1/>; Untitled, *The Mitchell Capital* (Mitchell, SD), 3/11/1892, <https://chroniclingamerica.loc.gov/lccn/sn2001063112/1892-03-11/ed-1/seq-4/>.

become a low, bubbling panic: some rumors suggested farmers were paying \$4 a day to secure hands, an absolutely unheard of rate.⁶⁴ (The grain markets of Chicago noticed, too—wheat prices slipped from about 90 cents per bushel at year’s start to 80 cents by the time of the harvest.)⁶⁵ On May 31st, the national weather service reported that harvest was to begin in ten days’ time.⁶⁶

From there, the race was on. Farmers “filled” the streets of Kansas towns, seeking harvest hands, engaging them the moment they stepped off the train.⁶⁷ Wages topped out everywhere at more than \$2 per day—though only \$2 a week for the women who fed them.⁶⁸ Thousands flooded in from out of state, coming through Kansas City along the railways—but it still wasn’t enough.⁶⁹ For the first time ever, the state negotiated a special “harvest excursion” rate with the railroads, securing rides for only a nominal fare (or none at all!) along all the major trunk lines, so long as a man was coming to work in the harvest field.⁷⁰ Railroads were hardly doing a kindness here—rather, they saw the potential for thousands upon thousands of carloads of grain, a potential that would not be met if there were too few workers.⁷¹ And despite the special rate, the usual hyperbole of farmers kidnapping potential

⁶⁴ “Neighborhood Happenings,” *Barton County Democrat* (Great Bend, KS), 6/2/1892, <https://chroniclingamerica.loc.gov/lccn/sn83040198/1892-06-02/ed-1/seq-1/>.

⁶⁵ *Annual Report of the Board of Trade of the City of Chicago for the Year Ending December 31st, 1892*, Chicago: Chicago Board of Trade, 1893.

⁶⁶ “Official Weather,” *Western Kansas World* (WaKeeney, KS), 6/4/1892, <https://chroniclingamerica.loc.gov/lccn/sn82015485/1892-06-04/ed-1/seq-6/>.

⁶⁷ Untitled, *The Goodland Republic*, (Goodland, Kan.), 7/8/1892.

⁶⁸ Untitled, *Western Kansas World* (WaKeeney, KS), 7/30/1892, <https://chroniclingamerica.loc.gov/lccn/sn82015485/1892-07-30/ed-1/seq-4/>.

⁶⁹ “Personals,” *The Wichita Daily Eagle* (Wichita, KS), 7/7/1892, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1892-07-07/ed-1/seq-5/>.

⁷⁰ “Harvest Hand Excursions,” *Salina Herald* (Salina, KS), 7/1/1892, <https://www.newspapers.com/image/484606711/>; Untitled, *Omaha Daily Bee* (Omaha, NE), 7/10/1892, <https://chroniclingamerica.loc.gov/lccn/sn99021999/1892-07-10/ed-1/seq-8/>; “1892 to Be a Record-Breaker,” *The Wichita Daily Eagle* (Wichita, KS), 7/7/1892, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1892-07-07/ed-1/seq-4/>.

⁷¹ See Isern, *Bull Threshers and Bindlestiffs*, pp. 149-50.

hands, and reports of teachers, businessmen, and even circuit court judges setting aside their day jobs for much more lucrative work in the fields, it still looked to be not enough.⁷² Seventy million bushels of wheat was the final tally: one for every citizen in the United States.⁷³ In the end, a reported 20,000 harvest hands came from outside the state to help the wheat crop, working from June through August, just barely bringing in the wheat before it spoiled.⁷⁴

Almost as soon as the harvest ended in Kansas, it began in the Dakotas. Here, its fury was a little subdued—neither of the Dakotas nor Minnesota had a record year like Kansas—but it was still well above the past few years' average.⁷⁵ Nor did it have to be record-breaking to strain the labor supply to its breaking point. With transients still tied up in Kansas threshing, the call was put out for another 10,000 laborers in late July.⁷⁶ That number turned out to be conservative—by the time the harvest had begun, the Dakotas required something more like 40,000 migrants.⁷⁷ Hundreds of hands came in on every train, but never enough. Even when they were contracted to work at a specific destination, they rarely made it—instead being hired for more money at an earlier stop.⁷⁸ It was only in late August, just as the harvest was coming to a close, that it became evident that crops wouldn't be lost.⁷⁹ The last

⁷² "Neighborhood Happenings," *Barton County Democrat* (Great Bend, KS), 6/9/1892, <https://chroniclingamerica.loc.gov/lccn/sn83040198/1892-06-09/ed-1/seq-1/>; "State News," *Chase County Leader* (Cottonwood Falls, KS), 7/21/1892, <https://www.newspapers.com/image/341787725/>.

⁷³ *Report to the Secretary of Agriculture for the Year 1892*.

⁷⁴ "Big Crop in Kansas," *St. Paul Daily Globe* (Saint Paul, MN), 7/2/1892, <https://chroniclingamerica.loc.gov/lccn/sn90059522/1892-07-02/ed-1/seq-3/>.

⁷⁵ *Report to the Secretary of Agriculture for the Year 1892*.

⁷⁶ "The Crop Calls for Help," *Omaha Daily Bee* (Omaha, NE), 7/27/1892, <https://chroniclingamerica.loc.gov/lccn/sn99021999/1892-07-27/ed-1/seq-4/>.

⁷⁷ "Harvest Hands Wanted," *Canadian Courier and Courier-Tribune* (El Reno, OK), 8/4/1892, <https://www.newspapers.com/image/582947840/>.

⁷⁸ "Local Items," *The Bottineau Pioneer* (Bottineau, ND), 8/6/1892, <https://chroniclingamerica.loc.gov/lccn/sn88076679/1892-08-06/ed-1/seq-1/>.

⁷⁹ "Wheat Prospects," *Jamestown Weekly Alert* (Jamestown, Stutsman County, ND), 8/25/1892, <https://chroniclingamerica.loc.gov/lccn/sn85042405/1892-08-25/ed-1/seq-1/>.

few trickled into the West in September, following threshing work, and only departed in October, just ahead of the first snows.⁸⁰

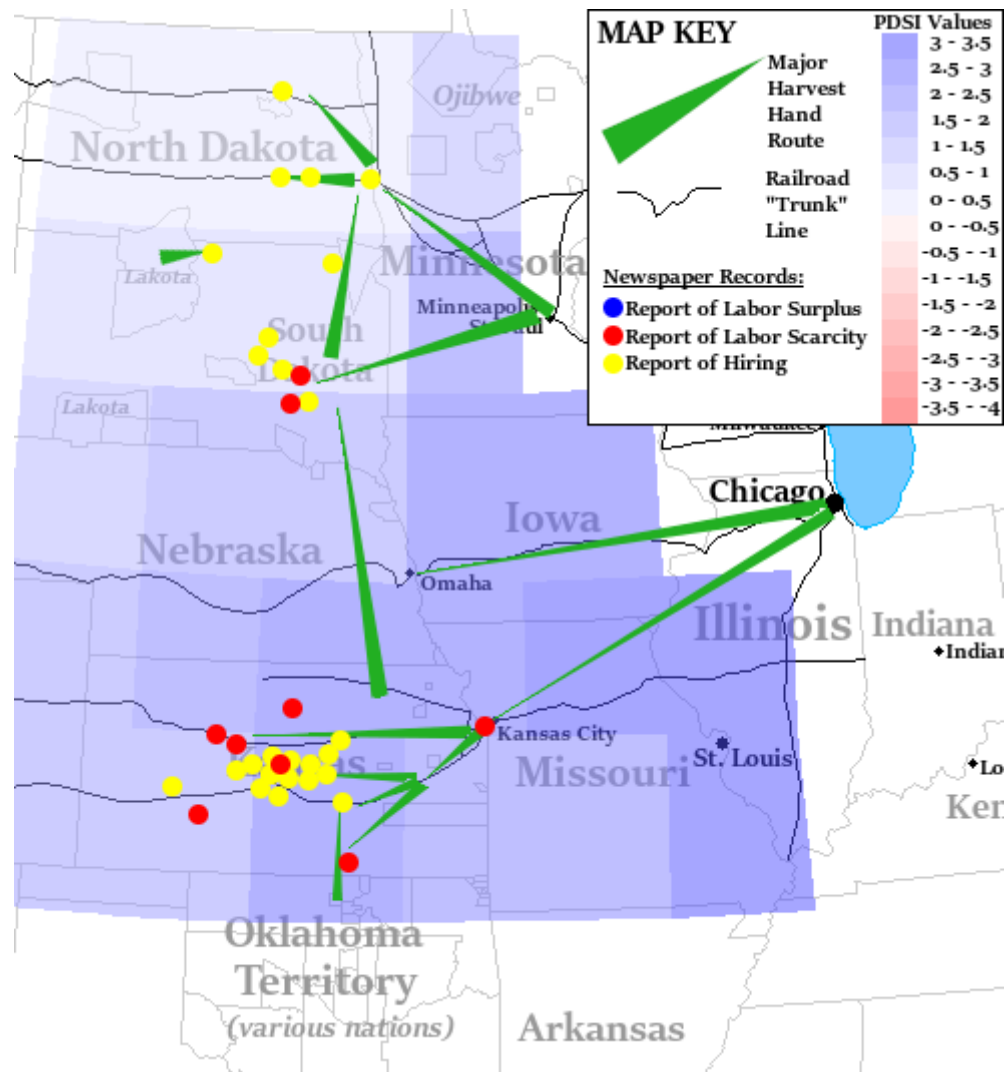


Figure 9. Map: The 1892 Harvest. In this harvest, roughly 20,000 harvest hands were recruited from out of state to work in Kansas, and another 40,000 in North and South Dakota and the Red River Valley in Minnesota. Harvest hand travel routes have been inferred from reports of arriving harvest hands. Note that the reduced railroad rates eased travel from Chicago to Kansas City and Omaha, and from the Twin Cities (Minneapolis/St. Paul) to North

⁸⁰ See a report on a harvest hand leaving and getting murdered: "Murdered While He Slept," *St. Paul Daily Globe* (Saint Paul, MN), 10/20/1892, <https://chroniclingamerica.loc.gov/lccn/sn90059522/1892-10-20/ed-1/seq-1/>.

and South Dakota. A fairly large contingent of harvest hands from the local Indian Reservation are reported to have been recruited in nearby South Dakota. SOURCE: image by author.⁸¹

This was the hobo work regime in good times. Farmers found workers, worked alongside them, paid them high wages, fed them at their family dinner tables. Hobos found adventure, well-paying jobs, and a sense of purpose; they got to travel across the country and save up for their return home. A towering empire of grain, built on colonized land—every white man could share in this bounty, even if they didn't live on the grasslands. But the bounty was never guaranteed—something that would be painfully illustrated the very next year.

After 1892, 1893 was a nightmare. It began, again, with the weather. This time, the atmospheric lows that swept across the nation somehow, studiously, avoided the Great Plains. On the occasions when they did bother to cross the prairies, they usually came from across the Rocky Mountains, having already dumped their rain on the western slopes, carrying nothing but wind to the east. A late September storm crossed the northern Plains, dropping some much-needed rain on the Red River Valley between Minnesota and the Dakotas, just before the harvest.⁸² Otherwise, the skies were stubbornly blue. The weather maps are borne out by modern dendrochronology: all but the easternmost trees of the Great Plains show narrow rings for 1893—the result of constant high pressure systems, and very little rain.⁸³

⁸¹ This map uses the same *Chronicling America* newspaper source base as the charts above. Additional reports have been culled from Newspapers.com, which, while too inconsistent to include in the newspaper report charts, do provide some additional insight into harvest hand hiring and movement.

⁸² "U.S. Department of Agriculture Weather Map," 9/18/1893, from "Daily Weather Maps," *National Climatic Data Center*.

⁸³ Cook and Krusic, "The North American Drought Atlas."

The enthusiasm we previously saw in 1892 Kansas for recruiting of harvest hands had entirely evaporated. No one advised their neighbors to recruit harvest hands in February. No one did so in March, April, or May, either. By June, one of the few Kansas newspapers which bothered to mention harvest hands noted, “The farmers are this year pretty well supplied with harvest hands, and it is thought that none will have to be imported from other localities.”⁸⁴ We know, from a couple of other sources, that *some* harvest hands had been hired, but absolutely nothing like Kansas’s 20,000 in the previous year. In lieu of the earlier rushes to lasso hired help, the harvest hands were thicker than drunks “around a Missouri bar.”⁸⁵ Some farmers, their own land desiccated, hired themselves out to others as harvest hands to make ends meet.⁸⁶

The situation did not improve with latitude; the Dakotas, too, had suffered dearly. The first problem here was that the price of wheat fell dramatically before the Dakota harvests (see below). Farmers alliances in counties around North and South Dakota agreed upon set wages, hoping to avoid a bidding war over the few harvest hands they would need.⁸⁷ Meanwhile, wheat prospects waned while harvest hands arrived in thickets—southern areas reported crowds of idle men.⁸⁸ Journalists tended to blame the men themselves, saying they refused to work for anything but high wages in times of hardship, but the sheer quantity of

⁸⁴ “Local Comment,” *Barton County Democrat* (Great Bend, KS), 6/1/1893, <https://chroniclingamerica.loc.gov/lccn/sn83040198/1893-06-01/ed-1/seq-8/>.

⁸⁵ “County Correspondence,” *People’s Voice* (Wellington, KS), 6/23/1893, <https://chroniclingamerica.loc.gov/lccn/sn85032801/1893-06-23/ed-1/seq-4/>.

⁸⁶ Untitled, *Phillipsburg Herald* (Phillipsburg, KS), 7/27/1893, <https://chroniclingamerica.loc.gov/lccn/sn85029677/1893-07-27/ed-1/seq-2/>.

⁸⁷ “Harvest Wages,” *The Madison Daily Leader* (Madison, SD), 7/20/1893, <https://chroniclingamerica.loc.gov/lccn/sn99062034/1893-07-20/ed-1/seq-2/>; “Around the State,” *Bismarck Weekly Tribune* (Bismarck, Dakota ND), 8/4/1893, <https://chroniclingamerica.loc.gov/lccn/sn85042588/1893-08-04/ed-1/seq-7/>.

⁸⁸ Untitled, *Phillipsburg Herald* (Phillipsburg, KS), 7/27/1893, <https://chroniclingamerica.loc.gov/lccn/sn85029677/1893-07-27/ed-1/seq-2/>.

men coming into the state belied that theory.⁸⁹ A year after the Dakotas estimated they had been 40,000 laborers short, it seemed like every town had surplus workers—everywhere but the Red River Valley, where the late rain caused about a month of hiring and scarcity before the excess of workers crushed in.

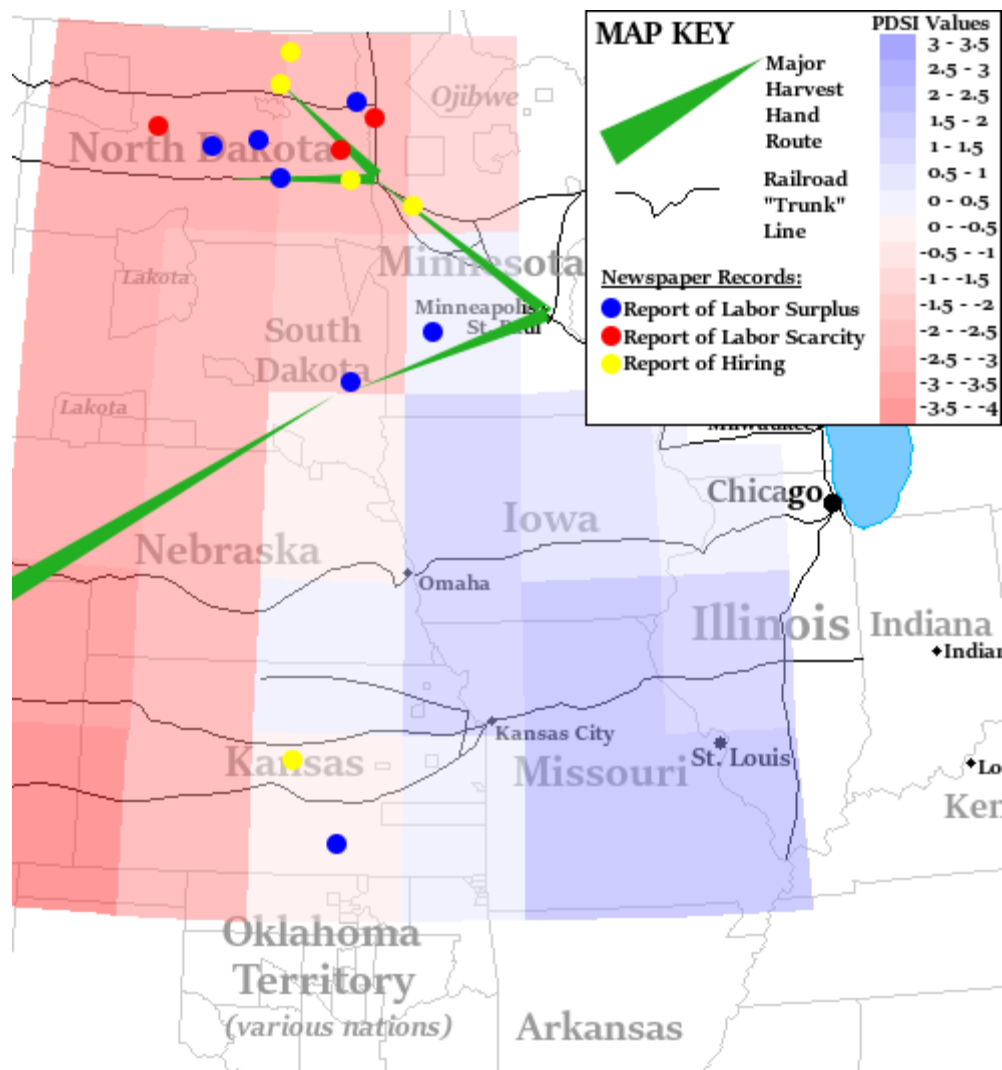


Figure 10. Map: The 1893 Harvest. In this harvest, reports indicate that few, if any, harvest hands were recruited from out of state in Kansas, and perhaps 2-5,000 for the Dakotas and Red River Valley of Minnesota, though contemporary accounts suggest many more would-be harvest hands actually came and waited for work that never materialized. Out-of-work miners

⁸⁹ "County Correspondence," *People's Voice* (Wellington, KS), 6/23/1893, <https://chroniclingamerica.loc.gov/lccn/sn85032801/1893-06-23/ed-1/seq-4/>; "Nearly All No. 1," *The Redwood Gazette* (Redwood Falls, MN), 8/10/1893, <https://chroniclingamerica.loc.gov/lccn/sn85025570/1893-08-10/ed-1/seq-2/>.

from Colorado are reported to have come to the Dakotas, as well as various unemployed workers from Minneapolis/St. Paul. SOURCE: image by author.

The drought did not abate. Instead, it lingered on for half a decade; the 1890s became enshrined in Great Plains memory as the worst drought until the Dust Bowl of the 1930s.⁹⁰ Year after year, this manifested as surplus crowds of harvest hands across each of the Plains states. Compounding factors, of course, exacerbated conditions on the Great Plains. A global depression, particularly acute in the United States, had led directly to the unemployment of a fair number of urbanites—some of whom undoubtedly sought work in the wheat fields and added to the surplus.⁹¹ But the year-to-year correlation of climate on the one hand and labor surpluses and deficits extends well beyond the 1890s depression—in both directions. What contemporaries often blamed on the general economic situation was in fact a window into the material reality of their work. Without wheat to bring in, people accustomed to making ends meet by spending a summer at harvest would stand idly around rural towns, waiting for work that never came.

Bizarrely, however, the 1890s drought—the same drought that ravaged the massive Great Plains wheat harvest—coincided with a *decline* in wheat prices. In Chicago, the market that effectively governed global grain prices, wheat nearly halved from a dollar a bushel in 1892 to 50 cents by the end of 1893.⁹² In London, wheat fell by about 30% from 1891 to 1894.⁹³ Yet despite a catastrophic decline in the grain harvest—and in apparent defiance of

⁹⁰ Sweeney, *Prelude to the Dust Bowl*, pp. 157-216.

⁹¹ Eric Hobsbawm, *The Age of Empire: 1875-1914* (New York: Vintage Books, 1987).

⁹² *Annual Report of the Board of Trade of the City of Chicago for the Year Ending December 31st, 1893* (Chicago: Chicago Board of Trade, 1894).

⁹³ "Wheat Prices since the 13th Century," *Our World in Data*, 2020, <https://ourworldindata.org/food-prices>.

supply and demand—wheat kept falling.⁹⁴ The answer to this paradox, as contemporaries were keenly aware, was that the grain market was global.

The products of hobo hands did not stay in the Great Plains, nor even in the United States. From the time the wheat frontier had crossed into the Ohio Valley onwards, the United States was a grain exporter.⁹⁵ Chicago was built on this trade; the opening of the Great Plains would have been unimaginable without it; every get-rich-quick scheme of the nineteenth century grain farmer relied on global markets.⁹⁶ Grain exports were comparable in value to the oft-studied cotton exports across most of the nineteenth century—and just as important to the global economy.⁹⁷ American grain fed growing American and European cities, propelling the Industrial Revolution with its surplus calories.⁹⁸ But the grain trade cut both ways: at the exact same time as settlers cultivated the American Great Plains, exploiting a settler colonial bounty of fertility to generate unheard of yields, the exact same things happened in settler colonies around the world. The Argentine Pampas became a major rival to the American Great Plains, as did the Russian steppe and the Australian Outback. Each of these grain-growing regions were predicated on the removal and extermination of indigenous peoples, and each produced extraordinary wheat yields. The result, by the 1890s, was a glut of wheat in the market, one sufficient that prices crashed right along with the global economy.⁹⁹

⁹⁴ *Annual Report... 1893*; "Wheat Prices."

⁹⁵ Appleby, *Capitalism and a New Social Order*.

⁹⁶ Cronon, *Nature's Metropolis*.

⁹⁷ Susan B. Carter, Scott Sigmund Gartner, Michael R. Haines, Alan L. Olmstead, Richard Sutch, Gavin Wright, *Historical Statistics of the United States: Millennial Online Edition* (Cambridge University Press, 2020), <https://hsus.cambridge.org/HSUSWeb/HSUSEntryServlet>.

⁹⁸ James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Angloworld* (New York: Oxford UP, 2009).

⁹⁹ See M. K. Bennett "Trends of Yields in Major Wheat Regions since 1885," *Wheat Studies of the Food Research Institute* XIV, no. 3 (November 1937); and Manabu Suhara, "Russian Agricultural Statistics," *Russian Research*

For all that, however, the wheat distribution system continued, and most of its wealthier participants felt few effects. The commodity traders in Chicago lost little money in the matter, nor did the grain merchants with their towering elevators. The gulf between people who made money and people who made actual wheat only grew as the 1890s wore on, with farmers driven deeper into debt while merchants felt no ill effects. This was one of the major factors fomenting the Populist Party's meteoric rise in the West, as farmers clamored to redistribute money down to those who actually produced.¹⁰⁰ This desire appeared to be sincere—as I show below, the Populists regularly supported the efforts of harvest hands to secure a better livelihood.

But everywhere, this production process was marred by excess. The inefficiency of distributing labor in the harvest was only one aspect of this. From there, wheat kernels were loaded into train cars that imperfectly contained them, often in the open air. Wheat literally *leaked* out of the system, both in transit and at railyards.¹⁰¹ Towering silos and grain elevators were built to reject imperfect grain; mills to make it palatable at the expense of calories—though the rejected silage made its way into animal feed, it was still illustrative of a system built for surplus.¹⁰² No one was concerned about famine.

The global nature of grain—and its reliance on settler colonial bounties—meant that the food *system* was virtually impervious to climatological shocks. Americans—and Europeans—did not starve due to a failure of grain in the Great Plains. Food production was

Center Working Paper Series no. 67 (March 2017). Accessed 8/10/2020, http://www.ier.hit-u.ac.jp/rrc/japanese/pdf/RRC_WP_No67.pdf; American papers noted the harvests of each; see reports like (for the Australian case) "Wheat Harvest Poor," *The Cooperstown Courier* (Cooperstown, ND), 11/13/1902, <https://chroniclingamerica.loc.gov/lccn/sn88076341/1902-11-13/ed-1/seq-2/>.

¹⁰⁰ Charles Postel, *The Populist Vision* (New York: Oxford University Press, 2007).

¹⁰¹ Dennis DeBruler, "Carrying Grain in Boxcars," *Industrial History*, 11/10/2015, <http://industrialscenery.blogspot.com/2015/11/carrying-grain-in-boxcars.html>.

¹⁰² Cronon, *Nature's Metropolis*, pp. 97-147.

built to insulate them from price and production signals; the only people who could starve were the indigenous people whose land they had taken—and other victims of colonialism elsewhere, who the grain political economy quite intentionally routed around.¹⁰³ However, the system was unsustainable in another key way—settler colonial bounties of fertility did not last forever. Wheat yields in the Great Plains had plummeted from their initial, mind-boggling highs during settlement, and continued to slacken over the late nineteenth century.¹⁰⁴ The wheat system was built for excess—but eventually, new land for cultivation ran out. That story, however, and the story for why productivity eventually stabilized and even started to increase, would come after the demise of the harvest hand and the hobo.

But for the migrant worker, perhaps the most profound ramification of the drought was political. The “tramp problem”—i.e., fears around homeless men in American cities—had first been raised in the 1870s, and was once more in the depression of the 1890s.¹⁰⁵ Contemporaries feared what unattached men with no visible means of support might do. The lack of a family, in their eyes, predisposed them to violence and drunkenness, opening men to an animalistic nature. Tramp life in particular was feared as a haven for homosexuality and non-normative behaviors, one that might draw in innocent children. Their rootlessness, moreover, made them a threat to communities: no one knew them, meaning they could not

¹⁰³ Tamara Levi, *Food, Control, and Resistance: Rations and Indigenous Peoples in the United States and South Australia* (Lubbock: Texas Tech University Press, 2016). See also Mike Davis, *Late Victorian Holocausts* (New York: Verso Press, 2000).

¹⁰⁴ *Report to the Secretary of Agriculture for the Year 1901*, Washington DC: GPO, 1902; see also M. K. Bennett, “Trends of Yields in Major Wheat Regions since 1885,” *Wheat Studies of the Food Research Institute* XIV, no. 6 (March 1938).

¹⁰⁵ See Francis Wayland, *Papers on Out-Door Relief and Tramps, Read at the Saratoga Meeting of the American Social Science Association, before the Conference of State Charities, September 5th & 6th, 1877*. See also Amy Dru Stanley, *From Bondage to Contract: Wage Labor, Marriage, and the Market in the Age of Slave Emancipation* (New York: Cambridge University Press, 1998), pp. 98-137; Todd DePastino, *Citizen Hobo: How a Century of Homelessness Shaped America* (Chicago: University of Chicago Press, 2003), pp. 3-29.

be trusted. Communities viewed tramps as a source of crime. The migrant worker, in other words, was already an object of skepticism and concern.¹⁰⁶

But early on, this dynamic was largely absent from the Kansas and Dakota wheat harvests. Though some lamented the class of people who came into their towns, the most frequent mention of harvest hands in local papers in the 1880s was hiring notices; “harvest hand” was even an affectionate nickname for newborn children in the decade.¹⁰⁷ The relative egalitarianism of the harvest followed from this logic. The Great Plains were one of the few places where hobos were welcome. The surplus men and tight wallets of the drought years, however, appear to have changed this. Labor conditions grew more bitter. In the election years of 1892, 1894, and 1896, tramps became an increasingly fierce topic of debate, as the Populist party took a relatively lenient stance. Police across the state of Kansas were instructed by its Populist governor, Lewelling, not to arrest or drive off hobos. Employment agencies were established to get them jobs. The Populists’ main rivals, the Republicans, blamed them for a supposed surge of tramp activity in the state.¹⁰⁸ This debate not only made hobos a point of contention—it served to turn public opinion against harvest hands much more broadly.

During and after the 1890s, suspicion of migrant workers appears to have grown. Accusations of murder began to surface in the 1890s, not just of migrants murdering other harvest hands, but of murdered regular citizens, farmers, and even farmers’ children.¹⁰⁹

¹⁰⁶ See again Higbie, *Indispensable Outcasts*.

¹⁰⁷ Isern, *Bull Threshers and Bindlestiffs*, pp. 130-173.

¹⁰⁸ “Lewelling’s Tramp Circular,” *Kansas Agitator*, (Garnett, KS), 12/21/1893, p. 5.

¹⁰⁹ “Criminal Notes,” *Wichita Daily Eagle* 8/30/1892, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1892-08-30/ed-1/seq-2/>; “Killed a Harvest Hand,” *Abilene Weekly Reflector*, 7/5/1900, <https://chroniclingamerica.loc.gov/lccn/sn84029386/1900-07-05/ed-1/seq-1/>; “Doc Kelly Stabbed,” *The Wichita Daily Eagle* (Wichita, KS), 7/10/1900, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1900-07-10/ed-1/seq-5/>.

Petty theft and crime became near constant topics in the papers, with tramps robbing harvest hands on the train ride home frequently.¹¹⁰ Harvest hands' cleanliness was constantly called into question, and state health officials, in classic Progressive Era fashion, started to investigate them as sources of diseases, particularly those diseases viewed as urban and unhygienic, like cholera.¹¹¹ Fears of tramps conning innocent housewives proliferated wildly as well, with an obsessive concern rising that those begging for money were only *pretending* to go to the harvest field, and in fact refusing work altogether.¹¹² Fear for the family reflected the degree to which migrant workers relied on the kindness of women to eat and survive—but it also meant harvest hands, who had been part of the family meals before, were increasingly seen as a destabilizing force on idyllic family life. Generally, the tramp had become a blank slate, a synecdoche for social ills.

Some sought to distinguish “tramps” (meaning non-workers) from “honest” “harvest hands” (who actually worked the harvest)—while others blurred the two categories together. Distinguishing the two generally relied on tried-and-tested tropes: where harvest hands sought to explore the country and get honest wages for hard work, tramps generally brought the problems of cities with them. In response to a proposal to send unemployed New

¹¹⁰ "Jamestown: City and Vicinity," *Jamestown Weekly Alert* (Jamestown, ND), 7/25/1895, <https://chroniclingamerica.loc.gov/lccn/sn85042405/1895-07-25/ed-1/seq-7/>; Untitled, *The People's Voice* (Wellington, KS), 8/23/1900, <https://chroniclingamerica.loc.gov/lccn/sn85032801/1900-08-23/ed-1/seq-2/>; Untitled, *The Wichita Daily Eagle* (Wichita, KS), 6/30/1901, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1901-06-30/ed-1/seq-12/>.

¹¹¹ "Smallpox at Carrington," *Bismarck Daily Tribune* (Bismarck, ND), 8/23/1901, <https://chroniclingamerica.loc.gov/lccn/sn85042242/1901-08-23/ed-1/seq-2/>; see also later examples like "Typhoid Appears in Kansas," *Abilene Weekly Reflector* (Abilene, KS) 6/18/1914, <https://chroniclingamerica.loc.gov/lccn/sn84029386/1914-06-18/ed-1/seq-8/>; "Harvest Hands Carry Cholera," *Dakota County Herald* (Dakota City, NE), 8/19/1915, <https://chroniclingamerica.loc.gov/lccn/2010270500/1915-08-19/ed-1/seq-4/>

¹¹² Untitled, *People's Voice* (Wellington, KS), 6/28/1900, <https://chroniclingamerica.loc.gov/lccn/sn85032801/1900-06-28/ed-1/seq-3/>; see again "Jamestown: City and Vicinity," *Jamestown Weekly Alert*, 7/25/1895.

Yorkers to the Kansas harvest fields, the director of the Kansas state employment bureau wrote: “such people that a New York Alderman would gather up on the streets and send here are the kind that this community does not want. [...] Kansas always welcomes thrifty, helpful people; but this state does not aim to be the poor house of the nation.”¹¹³ In contrast, college students who came out to the Great Plains to work the harvest fields were frequently lauded for their character and productivity—entirely out of proportion to their actual presence in the harvest field—being only a tiny fraction of the labor force.¹¹⁴ Black harvest surfaced every now and then, but primarily as victims or purveyors of racial violence in small towns.¹¹⁵ Each of these stereotypes served to reinforce the idea that some came to the harvest field to work, and others came to beg.

The consequences were severe—and not just for the more itinerant harvest hands. Scapegoating for crimes made more than a few harvest hands targets of extrajudicial and mob violence. Harvest hands were beaten, lynched, or thrown out of town.¹¹⁶ But more broadly, work relations appear to have been severely strained through the 1890s, as striking and explicit labor conflict became common.

Did the drought directly cause these problems? Certainly not. As I argued above, the climate played a determinative but not all-encompassing role; as with the rise of the harvest

¹¹³ "Don't Need Them," *The Topeka State Journal* (Topeka, KS), 6/26/1901, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1901-06-26/ed-1/seq-1/>.

¹¹⁴ Isen, *Bull Threshers and Bindlestiffs*, p. 136.

¹¹⁵ See again "Doc Kelly Stabbed," *The Wichita Daily Eagle*, July 10, 1900; see also "Almost a Lynching," *The Bottineau Courant* (Bottineau, ND), 8/6/1898, <https://chroniclingamerica.loc.gov/lccn/sn88076086/1898-08-06/ed-1/seq-5/>; "He Warns Colored Men," *The Fargo Forum and Daily Republican* (Fargo, ND), 8/2/1911, <https://chroniclingamerica.loc.gov/lccn/sn85042224/1911-08-02/ed-1/seq-2/>; "Negroes Had to Leave," *Bismarck Daily Tribune* (Bismarck, ND), 8/30/1912, <https://chroniclingamerica.loc.gov/lccn/sn85042242/1912-08-30/ed-1/seq-1/>.

¹¹⁶ See again "Criminal Notes," *Wichita Daily Eagle*, August 30, 1892; "Tramp Attacks Girl," *The Topeka State Journal* (Topeka, KS), 6/19/1915, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1915-06-19/ed-1/seq-7/>.

hand, the increasing suspicion of the harvest hand was an emergent property arising from climatic conditions and the economic and penal systems around them. The main roles of the drought were to create a consistent, multiyear surplus of would-be harvest hands, and to devastate farmers' livelihoods. Newspapers struggled to explain the surplus as anything other than moral terms—as the laziness of those involved. The destruction of multiple harvests made it difficult to pay harvest hands a living wage, leading to increasing antagonism—antagonism that we shall now turn to. The drought was a major pivot point; as other environmental historians have documented, it lived on in the memories of farmers who feared the next year—and it would likewise leave a legacy in the labor relations between harvest hands and their employers.

The hobo, then, was treated with the same carelessness as the excess grain—allowed to spill out of train cars and rot in the rail yards. The beneficence of the railroad companies in encouraging harvest hands to come out—something they had a monetary stake in—was rarely matched on the way back. “When men were needed for harvest work the police and the railroad authorities did not disturb them much, when stealing illegal rides on the trains. But once the grain was gathered in and threshed, and the hordes of workers were returning to the cities, things were very different!” reminisced Charles Ashleigh of his harvest hand days. Police turfed hobos from cars, criminals shot and beat them for their earnings—and on top of all that, farmers increasingly saw hobos as employees and adversaries rather than as friendly faces at the dinner table. “The hoboos themselves are the victims of the law; it does

not protect them. Who can condemn them then, if they themselves administer the code of the road upon those who would deprive them of their earnings?"¹¹⁷

*** **

New Ways (Hobos on the Harvest in the Twentieth Century)

I had a job once threshing wheat,
Worked sixteen hours with hands and feet.
And when the moon was shining bright,
They kept me working all the night.
One moonlit night, I hate to tell,
I 'accidentally' slipped and fell.
My pitchfork went right in between,
Some cog wheels of that thresh-machine.

Ta-ra-ra-boom-de-ay!
It made a noise that way,
And wheels and bolts and hay,
Went flying every way.
That stingy rube said, 'Well!
A thousand gone to hell.'
But I did sleep that night,
I needed it all right.

So ran Joe Hill's version of "Ta-ra-ra-boom-de-ay," a labor anthem he wrote in the 1910s to the tune of the popular song.¹¹⁸ Hill was a "Wobbly," an activist of the International Workers of the World (I.W.W.). This "One Big Union," in direct contrast to its rivals and eventual slayers, the American Federation of Labor and Congress of Industrial Organizations, sought to organize workers from every industry into one big union, then call a general strike and bring down capitalism in one fell swoop.¹¹⁹ They were also the only major national union that made a serious or concerted effort to bring hobos into their labor union, seeing an

¹¹⁷ Charles Ashleigh, *Rambling Kid*, 1930, in Iain McIntyre, ed., *On the Fly! Hobo Literature and Songs, 1879-1941*, Oakland, CA: PM Press, 2018, pp. 202-3.

¹¹⁸ In McIntyre, *On the Fly!* pp. 215-6.

¹¹⁹ Melvin Dubofsky, *We Shall Be All: A History of the Industrial Workers of the World* (Chicago: Quadrangle Books, 1969).

opportunity to organize the by-now universally exploited and underpaid harvest hands in the fields of the Great Plains, and so control the grain supply of the nation.¹²⁰ The Wobblies sought to accomplish this aim both through recruiting harvest hands on trains, in jungles, in towns, by water tanks, and in the wheat fields, and through sabotaging the machinery of the harvest, breaking or blowing up reapers, threshers, and a variety of other farm equipment.¹²¹ Collectively, after the climate, unions in the 1910s became perhaps the second biggest fear of the wheat farmer.

Unionization undercut the ability of the farmer to dictate wages. It threatened the flexibility that had made the hobo work regime so valuable for wheat agriculture. Farmers could—and did—continue to trade labor among themselves through the next few decades, but such labor was usually not enough to bring in the entire wheat crop, as the continued employment of harvest hands even in bad years attests to. Therefore, while the 1890s had politicized the tramp and turned the harvest field into an ideological battlefield, the unionization of the 1900s and 1910s turned the harvest field into a literal battlefield. The climate still dictated labor conditions to a great degree. Now, however, the bidding wars of the good years were marked by strikes; the starving, out of work crowds of the bad years marked by deadly reprisals.

First, let us take two more case studies from before the arrival of the Wobblies to establish that roughly the same dynamics were at play in the 1900s as were in the 1890s—with some new wrinkles in labor relations. The two harvests I examine here—1903 and 1904—are very different from 1892 and 1893. The latter represent perhaps the most

¹²⁰ Sellars, *Oil, Wheat, and Wobblies*; Hall, *Harvest Wobblies*.

¹²¹ McIntyre, *On the Fly!* pp. 215.

remarkable contrast between two years in the history of American settlement on the Great Plains—a widespread bumper crop in 1892 versus one of the most catastrophic droughts in the region’s history in 1893. 1903 and 1904, by contrast, are chosen because they were not extraordinary at all. Instead, they illustrate the ordinariness of the climatic stress I explore in this chapter—and the ordinariness of the hobo work regime’s response.

In retrospect as well as at the time, the climatic data for 1903 indicated a marvelous year for wheat crops. Rain fell plentifully across the spring and summer, and farmers began to reach out for harvest hands—and worry about a shortage—by mid-April.¹²² The main drama of the year’s harvest came not from the weather, but from politics. Rumblings had been heard across the grain belt that farm hands had talked of a national union—not just of the estimated hundred thousand harvest hands, but the five million regular farmworkers in every industry.¹²³ Farmers hoped to counteract this in some places by forming “trusts” of their own, offering a fixed wage across counties (as they already had in earlier years).¹²⁴ But the thing that fascinated farmers in Kansas was a very public dispute over harvest hands between two central figures of the early 1900s harvests: T. B. Gerow, a Kansas public employment bureau agent, and David Blaine, a quixotic crusader whose principal aim in life appeared to be taking Gerow to task over his harvest hand estimates.

Every spring, Gerow reached out to farmers across the state, surveying men from every county to get a sense of how the crop was doing and how many harvest hands each

¹²² “They Come Early,” *The Topeka State Journal* (Topeka, KS), 4/9/1903, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1903-04-09/ed-1/seq-10/>; “In Short Grass Land,” *The Globe-Republican* (Dodge City, KS), 4/16/1903, <https://chroniclingamerica.loc.gov/lccn/sn84029853/1903-04-16/ed-1/seq-1/>.

¹²³ “Farm Labor Poorly Paid,” *Warren Sheaf* (Warren, MN), 1/22/1903, <https://chroniclingamerica.loc.gov/lccn/sn90059228/1903-01-22/ed-1/seq-8/>.

¹²⁴ Untitled, *Bismarck Daily Tribune* (Bismarck, ND), 5/15/1903, <https://chroniclingamerica.loc.gov/lccn/sn85042242/1903-05-15/ed-1/seq-2/>.

county's farmers were requesting.¹²⁵ And every spring, David Blaine would produce his own set of estimates (invariably higher) based on his surveys of on-the-ground conditions in his hometown of Pratt, Kansas.¹²⁶ It was a curious case of prairie farmers distrusting one form of expertise in favor of another—while Gerow's statistics were careful and generally very public, Blaine's tended to be more opaque, but republished by virtue of how he resided in the wheat belt and, supposedly, had a much more visceral stake in the harvest hand question.

1903 was no different. Gerow produced an initial estimate in April of 10,000 hands needed from outside Kansas—a fairly low figure—while Blaine more than doubled that with 25,000.¹²⁷ Over the next month, Blaine's estimates bounced around from 25 to 35-50,000, to 20,000, and finally to 30,000.¹²⁸ Gerow's figures relied on gradual updates from individual counties, but by late May, he had settled on around 20-25,000 for the year.¹²⁹ Farmers and journalists treated it rather like a horse race, reporting on the figures without too much seriousness; as one put it, "It's 30,000 extra harvest hands against the Hessian fly, drought,

¹²⁵ "They Come Early."

¹²⁶ "To Secure Harvest Hands," *The Wichita Daily Eagle* (Wichita, KS), 4/17/1903, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1903-04-17/ed-1/seq-5/>.

¹²⁷ "Along the Kansas Nile," *The Wichita Daily Eagle* (Wichita, KS), 4/22/1903, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1903-04-22/ed-1/seq-4/>.

¹²⁸ "Many Harvest Hands," *The Wichita Daily Eagle* (Wichita, KS), 4/24/1903, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1903-04-24/ed-1/seq-6/>; "Kansas Wanting More Laboring Men," *The Wichita Daily Eagle* (Wichita, KS), 5/7/1903, <<https://chroniclingamerica.loc.gov/lccn/sn82014635/1903-05-07/ed-1/seq-4/>; "Kansas Notes," *Phillipsburg Herald* (Phillipsburg, KS), 5/14/1903, <https://chroniclingamerica.loc.gov/lccn/sn85029677/1903-05-14/ed-1/seq-6/>; "30,000 Men Are Needed," *The Wichita Daily Eagle* (Wichita, KS), 5/14/1903, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1903-05-14/ed-1/seq-5/>.

¹²⁹ "Special Harvest Rate," *The Topeka State Journal* (Topeka, KS), 5/21/1903, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1903-05-21/ed-1/seq-3/>.

et al. Who'll be the victor?"¹³⁰ In reality, everyone expected a mad rush on harvest hands, one that even reduced railroad rates could not sate.¹³¹

This proved to be the case. Rains fed the crop well, and by late June, harvest hand shortages were reported all across southern Kansas, creeping into the center of the state by July, and reaching into Nebraska (a state rarely known for its harvest hand demands). Through it all, Gerow and Blaine alike raised their estimates over and over again, finally settling on roughly 30,000 being necessary. Gerow's public employment agency filled some 3,900 of these jobs with men out of Kansas City, Topeka, and Wichita, taking in harvest hands from the eastern states and ferrying them to points farther south and west.¹³² The other twenty thousand hands came from migrants who preferred to deal with farmers directly—and they had no trouble with this. Farmers stopped trains to hire hands, turned to their wives and daughters for extra labor, and so on—all the hallmarks of a successful Kansas harvest.

Almost immediately after the close of the Kansas harvests, the Dakotas began to bring in their wheat. By now, harvest hands frequently skipped up to the Dakotas if they wanted to keep working, bypassing the primarily maize-cultivating fields of Nebraska.¹³³ Others flooded in from the rest of the Northwest, through Minneapolis and Saint Paul and up to Fargo and Grand Forks, and from there into the countryside. As was the custom, harvest

¹³⁰ "Along the Kansas Nile," *The Wichita Daily Eagle* (Wichita, KS), 5/17/1903, <https://chroniclingamerica.loc.gov/lccn/sn82014635/1903-05-17/ed-1/seq-20/>.

¹³¹ For example, some Stafford County farmers paid their hands to wait around for a month before the harvest; see "Want 500 Men," *The Topeka State Journal* (Topeka, KS), 5/27/1903, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1903-05-27/ed-1/seq-6/>.

¹³² "Report of Kansas Employment Bureau," *Abilene Weekly Reflector* (Abilene, KS), 1/28/1904, <https://chroniclingamerica.loc.gov/lccn/sn84029386/1904-01-28/ed-1/seq-4/>.

¹³³ While both Lescohier and Isern express skepticism on this point, Nels Anderson makes it abundantly clear that many hobos did exactly this; see Nels Anderson, *The American Hobo*, p. 89.

hands traveling in groups received reductions on their travel costs.¹³⁴ But farmers feared an acute scarcity of harvest hands, as lampooned in the newspaper cartoon below; the main source of this was new regulations by the railroads to kick off free riders.¹³⁵



Figure 11. Image: Cartoon Satirizing the Harvest Hand Recruitment Process. SOURCE: "Rain in South Dakota," Evening Times-Republican (Marshalltown, IA), 8/4/1903, <https://chroniclingamerica.loc.gov/lccn/sn85049554/1903-08-04/ed-1/seq-1/>.

Here, too, the worries proved unfounded. A brief, troubling report came out of South Dakota, where "harvest hands have also suffered, for they could not work on rainy days, and were forced to lay around idle much of the time when they had expected to be earning good

¹³⁴ "Rates Are Now Effective," *The Saint Paul Globe* (St. Paul, MN), 7/28/1903, <https://chroniclingamerica.loc.gov/lccn/sn90059523/1903-07-28/ed-1/seq-9/>.

¹³⁵ "Must Pay or Walk," *The Mitchell Capital* (Mitchell, SD), 7/31/1903, <https://chroniclingamerica.loc.gov/lccn/sn2001063112/1903-07-31/ed-1/seq-3/>.

wages,” but this was an isolated incident.¹³⁶ For the most part, harvest hands streamed into the Dakotas and eventually into Manitoba, brought in the wheat harvest quickly, and reports of scarcity were rare. Reports of crime were not. Newspapers lauded the civility and good behavior of the harvest hands—but as one paper argued, “credit belongs not so much to the men as to the vigilance of the police.”¹³⁷ Elsewhere in the Dakotas, the harvest came with murders and robberies; criminals always arrived with the harvest hand.¹³⁸ It was a clear shift from the decade before.

¹³⁶ Tom Thurlby, “If the Farmer Would Make It Look Like a Government Job He Would Get Plenty of Harvest Hands,” *The Saint Paul Globe* (St. Paul, MN), 7/24/1903, <https://chroniclingamerica.loc.gov/lccn/sn90059523/1903-07-24/ed-1/seq-1/>.

¹³⁷ “Local News and Comment,” *Morris Tribune* (Morris, MN), 8/8/1903, <https://chroniclingamerica.loc.gov/lccn/sn91059394/1903-08-08/ed-1/seq-5/>.

¹³⁸ “Warned Against Burglars,” *The Saint Paul Globe* (St. Paul, MN), 8/13/1903, <https://chroniclingamerica.loc.gov/lccn/sn90059523/1903-08-13/ed-1/seq-3/>.

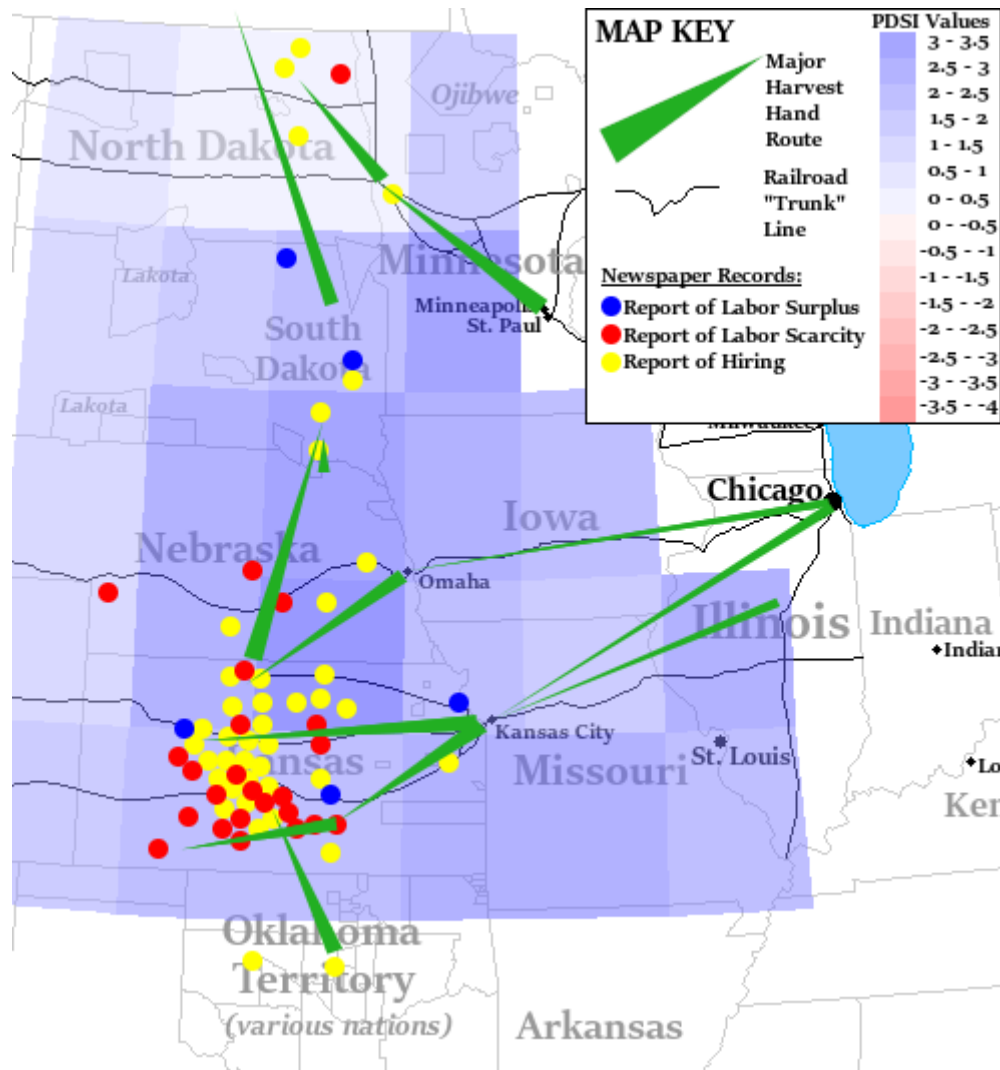


Figure 12. Map: The 1903 Harvest. Newspapers indicate that in this year, 30,000 harvest hands were employed in Kansas, perhaps 17,000 in the Northwest, and 20,000 more in Manitoba, in Canada. SOURCE: image by author.

Despite the overall success, the annual scramble to gather hands appeared to have worn thin: state free employment promised each other to cooperate for the 1904 harvest, sharing workers and directing them to avoid any panic or crop loss.¹³⁹ Altogether, they estimated the Plains states would require at least 45,000 migrant workers to harvest their

¹³⁹ "Help for the Farmers," *Omaha Daily Bee* (Omaha, NE), 10/25/1903, <https://chroniclingamerica.loc.gov/lccn/sn99021999/1903-10-25/ed-1/seq-5/>; "Interstate Labor Bureau," *Abilene Weekly Reflector* (Abilene, KS), 1/7/1904, <https://chroniclingamerica.loc.gov/lccn/sn84029386/1904-01-07/ed-1/seq-8/>.

fields between them.¹⁴⁰ This news mingled with another spring of fairly good weather reports—indeed, 1904 climate data is remarkably similar to that of 1903 in the aggregate. No drought was reported. On this basis, one early bird farmer wrote to T. B. Gerow, requesting 1,500 hands for his county three months before the harvest—something that invited incredulity from others: “[This man] has the kind of faith that moves mountains.”¹⁴¹ Others urged would-be harvest hands “not to start west until the residents of this section have completed their negotiations with the chinch bugs, the rust and the weather.”¹⁴² It proved to be a prescient warning.

In June, persistent rains afflicted Kansas wheat, swamping fields, oversaturating soil, and delaying the harvest.¹⁴³ At the same time, unemployment rates in the rest of the country soared, leading many eager job-seekers into the state, hoping to make enough to live on in the harvest.¹⁴⁴ The rain seemed like a minor event, but it proved catastrophic. The failure of crops in any one area snowballed into the next; the harvest hands kept coming, and one observer reported that “this country has been over-run.”¹⁴⁵ Hundreds of “anxious” men pleading for work were reported in the larger towns; Kansas City’s papers reported that the city was “uncomfortably crowded with harvest hands without transportation.”¹⁴⁶ Towns

¹⁴⁰ “Harvest Hands Are Sought Early,” *The Saint Paul Globe* (St. Paul, MN), 4/15/1904, <https://chroniclingamerica.loc.gov/lccn/sn90059523/1904-04-15/ed-1/seq-1/>.

¹⁴¹ Untitled, *The Topeka State Journal* (Topeka, KS), 3/19/1904, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1904-03-19/ed-1/seq-12/>.

¹⁴² Untitled, *Omaha Daily Bee* (Omaha, NE), 4/15/1904, <https://chroniclingamerica.loc.gov/lccn/sn99021999/1904-04-15/ed-1/seq-6/>.

¹⁴³ “Daily Weather Maps,” *National Climatic Data Center*.

¹⁴⁴ Stanley Lebergott, “Annual Estimates of Unemployment in the United States, 1900-1954,” in *The Measurement and Behavior of Unemployment*, National Bureau of Economic Research, 1957, <https://www.nber.org/chapters/c2644.pdf>.

¹⁴⁵ “Surplus of Harvest Hands,” *The Kinsley Graphic* (Kinsley, KS), 6/24/1904, <https://chroniclingamerica.loc.gov/lccn/sn84029671/1904-06-24/ed-1/seq-4/>.

¹⁴⁶ “Anxious” men from “Harvest Hands Ride Free,” *The Topeka State Journal* (Topeka, KS), 6/27/1904, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1904-06-27/ed-1/seq-2/>; longer quote from “Latest News in Brief,” *The Globe-Republican* (Dodge City, KS), 6/30/1904,

responded in a way the reader will by now recognize as predictable: making the harvest hands out to be a criminal element, sentencing them to hard labor on the rock pile, or driving them out.¹⁴⁷ Out-of-work hands took up refuge wherever they could, including a vast jungle on a river near Salina, which served as a refuge for hundreds of unemployed Black laborers.¹⁴⁸ Others responded with a tactic that was still new to the area: organizing in little unions, refusing to take low wages, and demanding the standard rates.¹⁴⁹ Kansas railroads, towns, and fields all swarmed with too many men—a problem that is all the more striking because of its absence in the north.

<https://chroniclingamerica.loc.gov/lccn/sn84029853/1904-06-30/ed-1/seq-7/>; other reports on these conditions include: “Heavy Rains Over the Southwest Harvest Fields Delay Work,” *The Minneapolis Journal* (Minneapolis, MN), 6/24/1904, <https://chroniclingamerica.loc.gov/lccn/sn83045366/1904-06-24/ed-1/seq-16/>; “Have Sent 400 Hands,” *The Topeka State Journal* (Topeka, KS), 6/29/1904, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1904-06-29/ed-1/seq-4/>.

¹⁴⁷ “Jayhawker Jots,” *The Topeka State Journal* (Topeka, KS), 6/22/1904, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1904-06-22/ed-1/seq-4/>.

¹⁴⁸ “Harvest Hands’ Establish a Camp at Ellsworth,” *The Topeka State Journal* (Topeka, KS), 7/2/1904, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1904-07-02/ed-1/seq-2/>.

¹⁴⁹ “Jayhawker Jots,” *The Topeka State Journal*, 6/22/1904.

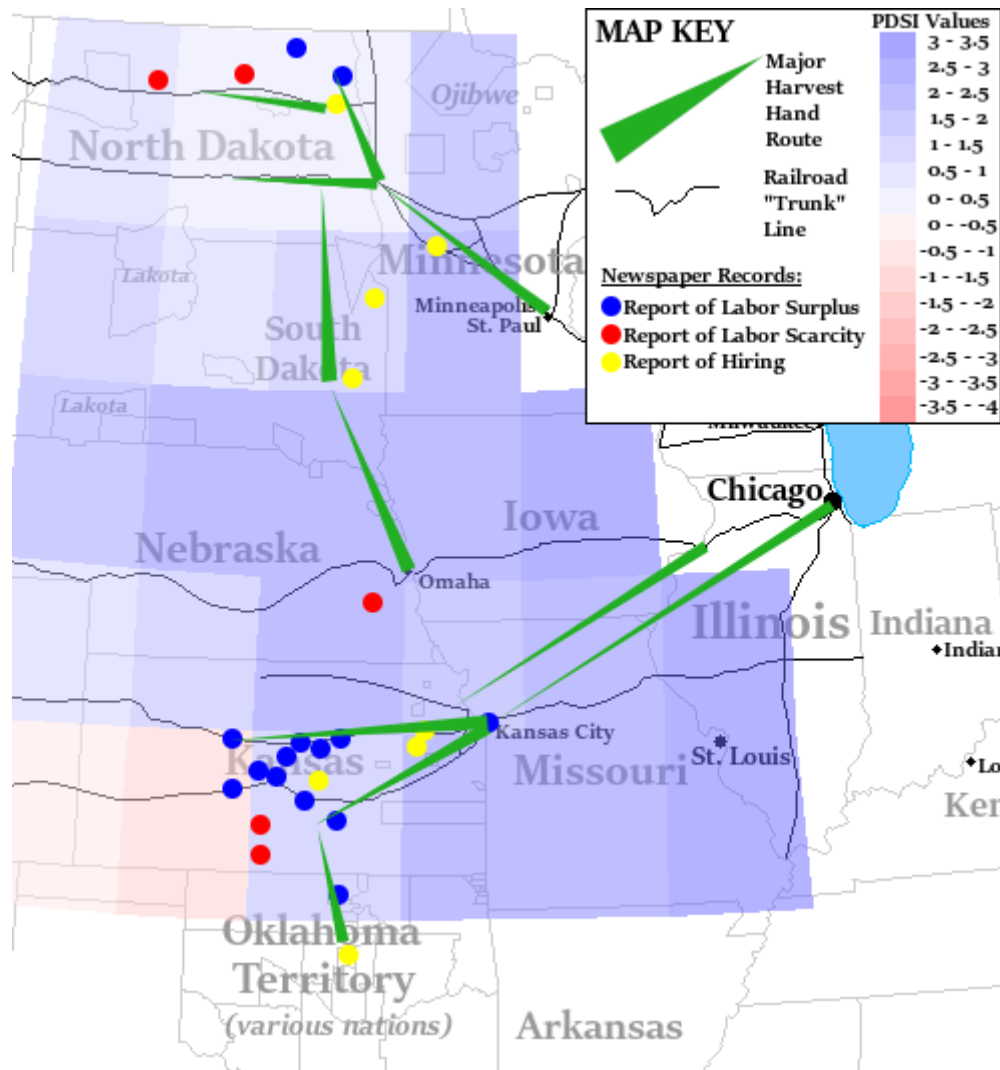


Figure 13. Map: The 1904 Harvest. Newspapers indicate that in this year, 20,000 harvest hands were employed in Kansas, perhaps as many as 40,000 in the Northwest, and 15,000 more in Manitoba, in Canada. SOURCE: image by author.

As we can see in the above map, while *some* reports of surplus laborers came out of the Dakotas, these were far fewer than the Kansas harvest—indeed, the ratio looks more or less identical to that of the 1903 harvest. Where Kansas estimated it would require 10,000 fewer laborers than the year before, the northwest (Minnesota and the two Dakotas) required roughly the same amount: 40,000 across the three states.¹⁵⁰ This regional disparity

¹⁵⁰ "Roads Say Laborers Will Be Plentiful," *The Saint Paul Globe* (St. Paul, MN), 7/1/1904, <https://chroniclingamerica.loc.gov/lccn/sn90059523/1904-07-01/ed-1/seq-4/>.

is vital to understanding the Great Plains. Without it, we might be tempted to conclude that the surge of surplus laborers in 1904 came out of rising national unemployment driving surplus workers from the city into the countryside. This was assuredly a factor—but the Dakota harvests absorbed this surplus without any trouble. The deciding factor here was the late-breaking rains that delayed and depressed the Kansas harvest—something that had not struck the Dakotas at all.

This was the harvest as it stood in the 1900s. By and large, climate still governed the work dynamics of the region: a good harvest meant plenty of employment; a bad one, idleness. But some things had changed: state and later federal governments hoped to organize the distribution of harvest hands to make things a little less chaotic; meanwhile, the association of crime with the influx of harvest hands had certainly escalated. Worse, from the harvest hand's point of view, was that conditions of work, sleep, and eating had slowly but steadily deteriorated. Hands remarked frequently in personal accounts that their food varied wildly depending on who they worked for, and could sometimes be borderline inedible, while sleeping conditions were hardly consistent from workplace to workplace.¹⁵¹ Farmers, on the other hand, remarked that they frequently desired to keep familiar faces around, but couldn't. Relations between the two, consequently, deteriorated. In other words, the harvest hand had become just another employee.

Starting in the 1910s, the I.W.W.—particularly its Agricultural Workers Industrial Union (no. 400)—sought to fight back against falling wages and difficult working conditions. But organizers met stiff resistance from farmowners, government officials at the state and federal level, and hobos and itinerant workers themselves—not to mention the difficulties

¹⁵¹ Anderson, *The American Hobo*, p. 49.

they met in organizing an itinerant labor force to begin with. Since farmers engaged harvest hands on an inconsistent and ad hoc basis, organizers found it difficult to predict who might be in the harvest fields for consecutive years, let alone who would be receptive to union action.¹⁵² This meant that, over and over again, organizers had to start from scratch, trying to build unions repeatedly among workers with little collective memory of the struggles the years before.¹⁵³

Nevertheless, they made enormous strides. Going into fields, sleeping and working and eating alongside workers, the Wobblies mobilized strikes seemingly every year.¹⁵⁴ Between roughly 1908 and 1921, the I.W.W. consistently advocated for higher wages, longer contracts, and better treatments—and became a serious thorn in farmowners' sides—particularly in the Dakotas, where they were strongest.¹⁵⁵ Sabotage became a source of considerable fear for hostile farmers, with workers promising “an unfair day’s work for an unfair day’s wage.”¹⁵⁶ At the height of these efforts, farmers were wont to see Wobbly plots

¹⁵² Anderson, *On Hoboes and Homelessness*, pp. 178-9.

¹⁵³ Sellars, *Oil, Wheat, and Wobblies*.

¹⁵⁴ Hall, *Harvest Wobblies*.

¹⁵⁵ A brief (hostile) history of these efforts is given here: "S. D. Battle with Radicals Started in 1908," *The Bismarck Tribune* (Bismarck, ND), 7/23/1921, <https://chroniclingamerica.loc.gov/lccn/sn85042243/1921-07-23/ed-1/seq-3/>. Further histories can be found in Higbie's wonderful treatment of the matter: Higbie, pp. 134-65. See also (again mostly hostile) primary treatments in: Untitled, *Courier Democrat* (Langdon, ND), 9/4/1913, <https://chroniclingamerica.loc.gov/lccn/sn88076432/1913-09-04/ed-1/seq-4/>; "Organized at Duluth," *The Bottineau Courant* (Bottineau, ND), 8/15/1913, <https://chroniclingamerica.loc.gov/lccn/sn88076086/1913-08-15/ed-1/seq-1/>; "I. W. W. Busy at Cdano [sic] Attempting to Organize Incoming Harvest Hands," *Grand Forks Daily Herald and the Evening Times* (Grand Forks, ND), 07 Aug. 1914, <https://chroniclingamerica.loc.gov/lccn/sn89074404/1914-08-07/ed-1/seq-8/>; "South Dakota Harvest Opened," *The Lemmon Herald* (Lemmon, SD), 8/9/1916, <https://chroniclingamerica.loc.gov/lccn/sn89074986/1916-08-09/ed-1/seq-1/>; "\$1.00 an Hour Is Aim of I. W. W.," *The Bowbells Tribune* (Bowbells, ND), 9/5/1919, <https://chroniclingamerica.loc.gov/lccn/sn88076095/1919-09-05/ed-1/seq-1/>.

¹⁵⁶ Quote from "Industrial Workers Reported Active," *Jamestown Weekly Alert* (Jamestown, ND), 10 Aug. 1916, <https://chroniclingamerica.loc.gov/lccn/sn85042405/1916-08-10/ed-1/seq-2/>. See also: "Farmers Find Iron Rods in Wheat Fields," *Abilene Weekly Reflector* (Abilene, KS), 6/24/1915, <https://chroniclingamerica.loc.gov/lccn/sn84029386/1915-06-24/ed-1/seq-11/>; "I. W. W. Men Attack Farmers," *Bismarck Daily Tribune* (Bismarck, ND), 9/18/1913, <https://chroniclingamerica.loc.gov/lccn/sn85042242/1913-09-18/ed-1/seq-2/>; "Damage Threshing Outfits,"

in every mundane misfortune, with one Dakotan blaming the Wobblies for his car not starting.¹⁵⁷ Other reports told of Wobbly organizers beating or murdering harvest hands who simply wanted a job; they read of phosphorous bombs thrown by I.W.W. hands; they read of trains captured and constant suspicious activity.¹⁵⁸ All of this, they might read, came despite valiant efforts by charitable organizations like the American Legion—and farmers themselves—to better working conditions.¹⁵⁹ Yet the Wobblies addressed very real problems, and as a result, they were enormously popular among harvest hands, and even among some of the sedentary population.¹⁶⁰ Even in 1921—years after the union's peak!—a survey by sociologist Nels Anderson found that a little under a quarter (74) of the four hundred hobos he interviewed belonged to the union, and that 43 more held favorable opinions of it.¹⁶¹ But in response to them, community elites fought back—hard.

State action to defang and crush union activity saturated the late nineteenth and early twentieth centuries. Legally, anti-vagrancy laws gave law enforcement a vague enough reason to arbitrarily arrest virtually anyone—something they routinely deployed against Wobblies agitating on the streets.¹⁶² Crowds of harvest hands gathered in 1914 to hear

The Oakes Times (Oakes, ND), 9/18/1913, <https://chroniclingamerica.loc.gov/lccn/sn87096017/1913-09-18/ed-1/seq-3/>. An earlier, pre-IWW example of apparent sabotage is in "A Dirty Trick," *Griggs Courier* (Cooperstown, ND), 9/14/1899, <https://chroniclingamerica.loc.gov/lccn/sn88076998/1899-09-14/ed-1/seq-7/>.

¹⁵⁷ Untitled, *Bismarck Daily Tribune* (Bismarck, ND), 9/9/1916, <https://chroniclingamerica.loc.gov/lccn/sn85042242/1916-09-09/ed-1/seq-4/>.

¹⁵⁸ "I.W.W. Carry on Industrial War," *The Abilene Weekly Reflector* (Abilene, KS), 7/13/1916, <https://chroniclingamerica.loc.gov/lccn/sn84029386/1916-07-13/ed-1/seq-2/>; "Guard Salina Jail," *Meade County News* (Meade, KS), 7/20/1916, <https://chroniclingamerica.loc.gov/lccn/sn85030287/1916-07-20/ed-1/seq-6/>; "I.W.W. at Work," *Barton County Democrat* (Great Bend, KS), 7/19/1914, <https://chroniclingamerica.loc.gov/lccn/sn83040198/1914-06-19/ed-1/seq-1/>.

¹⁵⁹ "Harvest Fields of Nebraska Are Free From Reds," *Omaha Daily Bee* (Omaha, NE), 7/30/1920, <https://chroniclingamerica.loc.gov/lccn/sn99021999/1920-07-30/ed-1/seq-1/>.

¹⁶⁰ A sympathetic article: "Mitchell Has Troubles with the Unemployed," *The Mobridge News* (Mobridge, SD), 8/3/1916, <https://chroniclingamerica.loc.gov/lccn/sn98069043/1916-08-03/ed-1/seq-10/>.

¹⁶¹ Anderson, *On Hoboes and Homelessness*, pp. 87-8.

¹⁶² Risa Goluboff, *Vagrant Nation: Police Power, Constitutional Change, and the Making of the 1960s* (New York: Oxford University Press, 2016), pp. 12-41.

I.W.W. speakers in Aberdeen, South Dakota, including Joseph Carey, Katy Solomon, Jane Kaufman—the latter earning the titles of “queen of the hobos” and “Agitator of the first rank”—each of them arrested in turn.¹⁶³ Newspapers eagerly noted the lawlessness of I.W.W. speakers, quoting Carey as responding to a threat of arrest: “Oh, I won't mind that... I've been arrested lots of times.”¹⁶⁴ (The speakers were eventually released, as the police sought to appease a crowd of sympathetic harvest hands who had gathered around the prison.¹⁶⁵) Similar events followed in 1915 and 1916. Against the largest gatherings, town police invited vigilante groups and militias to imprison or drive away harvest hands even *suspected* of belonging to the union—or simply attacking every harvest hand present.¹⁶⁶ In one incident, a Kansas county sheriff deputized fifty volunteer civilians to help imprison and fight union members.¹⁶⁷ In the most notorious incident—the “Battle of Mitchell,” five hundred vigilantes clashed with an equally large crowd sympathetic to the I.W.W.¹⁶⁸ Nor were the I.W.W.'s

¹⁶³ "Riotous Times in Aberdeen Caused by I. W. W. Hoboes," *The Mitchell Capital* (Mitchell, SD), 7/23/1914, <https://chroniclingamerica.loc.gov/lccn/sn2001063112/1914-07-23/ed-1/seq-7/>; "I. W. W. Agitators Try to Terrorize Aberdeen," *The Tabor Independent* (Tabor, SD), 7/23/1914, <https://chroniclingamerica.loc.gov/lccn/sn99062018/1914-07-23/ed-1/seq-6/>; "News of South Dakota," *Philip Weekly Review and Bad River News* (Philip, SD), 7/30/1914, <https://chroniclingamerica.loc.gov/lccn/sn95076626/1914-07-30/ed-1/seq-3/>.

¹⁶⁴ "Riotous Times in Aberdeen," *Mitchell Capital*.

¹⁶⁵ "Riotous Times in Aberdeen," *Mitchell Capital*.

¹⁶⁶ "I. W. W. Agitators Try to Terrorize Aberdeen," *The Tabor Independent*; "Dakota Men Control Outbreak of I. W. W. by Using Shotguns," *Forest City Press* (Forest City, SD), 8/2/1916, <https://chroniclingamerica.loc.gov/lccn/sn93057084/1916-08-02/ed-1/seq-2/>; "Whole Northwest Is Now Menaced," *The Brookings Register* (Brookings, SD), 8/3/1916, <https://chroniclingamerica.loc.gov/lccn/sn85042792/1916-08-03/ed-1/seq-1/>; "Weller Talks on Farm Labor," *The Mitchell Capital* (Mitchell, SD), 8/10/1916, <<https://chroniclingamerica.loc.gov/lccn/sn2001063112/1916-08-10/ed-1/seq-2/>.

¹⁶⁷ "Guard Salina Jail," *Meade County News*, July 20, 1916.

¹⁶⁸ "Mitchell Has Troubles with the Unemployed," *Mobridge News*; "Mitchell Vigilantes Hold Guns All Night on Rioting I. W. Ws," *The Mitchell Capital* (Mitchell, SD), 8/3/1916, <https://chroniclingamerica.loc.gov/lccn/sn2001063112/1916-08-03/ed-1/seq-7/>; "Mitchell Disarms 600 I.W.W.'s and Arrests Leaders," *Omaha Daily Bee* (Omaha, NE), 7/30/1916, <https://chroniclingamerica.loc.gov/lccn/sn99021999/1916-07-30/ed-1/seq-1/>; "I. W. W. Leaders Are Chased Out," *The Mitchell Capital* (Mitchell, SD), 8/3/1916, <https://chroniclingamerica.loc.gov/lccn/sn2001063112/1916-08-03/ed-1/seq-7/>. Notably, this latter example advocated for “Ku Klux Klan methods” to be implemented against the I.W.W. activists.

efforts mere melodrama—they successfully raised harvest hand wages to \$4 a day in several Dakota areas after years of refusals by farming leagues.¹⁶⁹ These actions would culminate in World War One, when the full force of the federal government came down on organizers across the country (see below).

Nor did Wobbly organizers have universal popularity among harvest hands. Some, undoubtedly, feared reprisal for belonging to the union, and others likely found the very idea of it distasteful. For many, the rhetorical divide between “tramps” and “harvest hands” likely gave them pause in joining what was a radical organization—pride and a desire to feel like part of respectable society. Journalists routinely wrote of—and perhaps fantasized about—workers fighting back against the I.W.W., usually with fists, but occasionally with murder.¹⁷⁰ Controversially, Wobblies installed an “eight hundred mile picket line” during harvest hand strikes, throwing non-members from trains (thus both enforcing the strike and putting harvest hands under protection of the union from rampant railroad crime).¹⁷¹ Workers, for their part, sometimes described the I.W.W. as “powerless to help the labor situation,” said that it did “more harm than good,” and harbored suspicions about labor leaders having “been sold out.”¹⁷² Others might join the I.W.W. without enthusiasm, purely to “get along better in the harvest.”¹⁷³ Still others held the union in reverence—convinced that the I.W.W. was destined to “save society.”¹⁷⁴ In light of all of these difficulties, it is perhaps unsurprising that

¹⁶⁹ "\$11.45 per Day Fair Wage, Says I. W. W. Backer," *The Fargo Forum and Daily Republican* (Fargo, ND), 6/27/1917, <https://chroniclingamerica.loc.gov/lccn/sn85042224/1917-06-27/ed-1/seq-1/>.

¹⁷⁰ "Harvest Hand Meets Death in Battle with Members of the I.W.W.," *Omaha Daily Bee* (Omaha, NE), 7/23/1916, <https://chroniclingamerica.loc.gov/lccn/sn99021999/1916-07-23/ed-1/seq-6/>.

¹⁷¹ Higbie, *Indispensable Outcasts*, p. 153.

¹⁷² First quote from “Document 26,” Nels Anderson, Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago Special Collections, Chicago, IL; second two from “Document 71,” Box 127, Folder 2, Burgess Papers.

¹⁷³ “Document 95,” Anderson, Burgess Papers, Box 127, Folder 3.

¹⁷⁴ “Document 44,” Anderson, Burgess Papers, Box 127, Folder 1.

Wobbly membership likely fluctuated wildly with the seasons, surging by tens of thousands in the summer harvest and fading in winter.¹⁷⁵

Industrial action emerged from the fact that twentieth century farming grew ever more mechanized, and by some metrics, industrialized. New reaper and combine harvester designs sought—very explicitly—to remove the harvest hand from the work of harvesting.¹⁷⁶ Self-binding harvesters were often cited by harvest hands, I.W.W. activists, and farmers alike as a major innovation that removed one of the most skilled and labor-intensive parts of harvest work. The result, as a Wobbly historian wrote, was that, “In the most developed regions the same relations prevail upon the farms as are found in the other industries, with the exception that the work is largely seasonal and therefore the employment is irregular and precarious.”¹⁷⁷ The gulf between worker and farm-owner (or -renter) manifested in many ways, some merely aspirational and some in living conditions. Kansas boosters had always claimed the incoming harvest hands might be so enraptured with the state that they could settle down and own a farm of their own, but “The price of farm land and the cost of farm equipment has advanced to such a figure that the farm wage worker... has a remarkably slim chance to become a farmer on his own account.”¹⁷⁸ Workers wrote of deteriorating conditions: being denied food, forced to sleep in haystacks while animals slept in the barn, of catching lice and cholera, and dying of blood infections.¹⁷⁹ And

¹⁷⁵ Anderson, *On Hoboes and Homelessness*, p. 179.

¹⁷⁶ "Why McCormick Changed from the Left to the Right Hand Binder," *The Kinsley Graphic* (Kinsley, KS), 5/7/1897, <https://chroniclingamerica.loc.gov/lccn/sn84029671/1897-05-07/ed-1/seq-2/>.

¹⁷⁷ Abner Woodruff, *Evolution of American Agriculture*, Chicago: Agricultural Workers Industrial Union No. 400 of the IWW, 1919, p. 72.

¹⁷⁸ Woodruff, *Evolution of American Agriculture*, p. 72.

¹⁷⁹ Edwin A. Brown, "Broke:" *The Man Without the Dime*, Boston: The Four Seas Company, 1920 (orig. 1913), p. 211; "Harvest War Song," in *I. W. W. Songs: To Fan the Flames of Discontent, Nineteenth Edition* (Chicago: Industrial Workers of the World, 1923), pp. 12-13 and E. W. Latchem, "The Modern Agricultural Slave," *One Big Union Monthly*, 8/1920 in McIntyre, *On the Fly!* p. 220;

of course, the work was monotonous, repetitive, and back-breaking; the efforts of each man in these “highly capitalized wheat ranches... keyed up by the fact that he was a cog in an organized apparatus of men and machinery.” It was, as one hobo described it, “killing work.”¹⁸⁰

Through it all, the migrant population of harvest hands only grew. Where harvests of the 1890s and 1900s might require anywhere from 15,000 to 60,000 hands from other regions, depending on the crop conditions, harvests of the late 1910s and early 1920s could require over 100,000 migrant workers.¹⁸¹ While in other regions the number of farm laborers had started to decline, arresting the growth of a would-be rural proletariat, this was not the case in the Great Plains. Rather, the increasing automation of harvesters seemed—for the most part—to be balanced out by other factors, like increasing acreage, threshing requirements, or the steady emigration of the children of farmers from the region.¹⁸²

The harvest influx—and a Progressive Era faith in the ability of governments to rationalize economies through regulation and moral governance—put enormous pressure on states to help farmers secure reliable harvest help.¹⁸³ Each of the Plains states set up state employment agencies, with offices in major cities both in and nearby their own states. These efforts commanded near-universal respect from farmers, who noted that they were both extremely capable of recruiting the vast numbers of harvest hands, but that they also responded swiftly and effectively to the sudden, unpredictable climate—one report on the

¹⁸⁰ McIntyre, *On the Fly!* p. 201.

¹⁸¹ See footnote 8.

¹⁸² Wright, “American Agriculture and the Labor Market.”

¹⁸³ For Progressive-era faith in government, see Elizabeth Sanders, *Roots of Reform: Farmers, Workers, and the American State, 1877-1917* (Chicago: University of Chicago Press, 1999) and Michael McGerr, *A Fierce Discontent: The Rise and Fall of the Progressive Movement in America, 1870-1920* (New York: Oxford University Press, 2003).

1902 harvest noted that extremely late-breaking May rains had saved the crops, requiring the state employment agents in Kansas to scramble to fill 6,000 hands in less than a month.¹⁸⁴ The system was not perfect—as it had been before the advent of the agencies, harvest hands promised for one area sometimes stopped early. But the work was valued nevertheless.

Meanwhile, industrialization and state efforts to ensure the labor supply also laid bare one of the more hidden labor forms involved in the harvest: cooking. Job ads occasionally mentioned wanting women as cooks and cleaners alongside harvest hands, and complaints occasionally surfaced about their undercompensation compared to men for the same number of hours. But increasingly centralized distribution by employment agencies revealed the scale of this labor. In years where the full statistics were publicized, calls for women to serve as harvest cooks made up around 2-3% of the total—1,040 of the 35,000 laborers in 1915 Kansas and 244 of the 10,456 in 1916 North Dakota.¹⁸⁵ Likely the number of cooks needed from out of state increased as time went on, especially as farming grew more industrial and professional, a process we have tracked through this chapter. In practice, it meant that women joined the migrant labor force in large numbers as well. Those women who fed harvest hands on their family farms found themselves increasingly helped—or perhaps buffeted—by advice and advertisements exhorting them to keep harvest hands happy with everything from canned meat to fried food.¹⁸⁶ Kitchens on farms were built

¹⁸⁴ "It Works Very Well," *The Topeka State Journal* (Topeka, KS), 1/7/1903, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1903-01-07/ed-1/seq-7/>.

¹⁸⁵ "Need 35,000 Hands," *The Topeka State Journal* (Topeka, KS), 6/8/1915, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1915-06-08/ed-1/seq-5/>. "Labor Agent Stanley Shows What May Be Accomplished in Labor Distribution," *Bismarck Daily Tribune* (Bismarck, ND), 10/8/1916, <https://chroniclingamerica.loc.gov/lccn/sn85042242/1916-10-08/ed-1/seq-10/>.

¹⁸⁶ "Are You Ready for Action? Be Prepared," *The Liberal Democrat* (Liberal, KS), 6/19/1919, <https://chroniclingamerica.loc.gov/lccn/sn85029856/1919-06-19/ed-1/seq-12/>; "Keep the Harvesters Satisfied," *The Liberal Democrat* (Liberal, KS), 7/10/1919, <https://chroniclingamerica.loc.gov/lccn/sn85029856/1919-07-10/ed-1/seq-6/>.

larger, to accommodate harvest cooking.¹⁸⁷ Like all parts of the migrant work regime, cooking had grown increasingly industrial.

Though the harvest hand work regime operated well through both bad and good years, the First World War seriously challenged it—not because of the demands it put on the workforce, but because it showed another world was possible. Great Plains farmers feared war the same way and for the same reasons they feared big construction projects—high wages would draw away the itinerant labors into other pursuits. But although they fussed about it at the time, neither ongoing settler colonial conflicts like the Indian Wars nor larger great power conflicts like the Spanish-American War ever seriously threatened the labor supply—as we saw with the newspaper accounts graph, neither Indian Wars in 1876 and 1889, nor the Spanish-American War in 1898 (and the longer Philippine guerilla conflict after it) even registered in job postings. The First World War involved a much larger mobilization of manpower and machinery, and it demanded a total rethinking of the harvest.

To put this in perspective, where turn of the century labor requirements averaged about 25,000 migrant workers in Kansas fields and a roughly equal number in the Dakotas, and where the 1910s had largely seen requirements of about 15,000-50,000 men, the requirements for the Kansas wheat fields *alone* in 1918 reached around 90,000 men, with 50,000 more in the Dakotas.¹⁸⁸ The by now normal methods of recruiting some through the state employment agencies and filling the rest with harvest hands who drifted into town

¹⁸⁷ "The Farm Kitchen," *The Bottineau Courant* (Bottineau, ND), 11/20/1914, <https://chroniclingamerica.loc.gov/lccn/sn88076086/1914-11-20/ed-1/seq-7/>.

¹⁸⁸ "90,000 Harvest Hands," *The Topeka State Journal* (Topeka, KS), 2/6/1918, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1918-02-06/ed-1/seq-8/>; "Labor Problem Will Present Difficulties," *Grand Forks Herald* (Grand Forks, ND), 7/20/1918, <https://chroniclingamerica.loc.gov/lccn/sn85042414/1918-07-20/ed-1/seq-3/>. Note that the latter article suggests around 100,000 were eventually needed in Kansas, and offers no estimate for the Minnesota side of the Red River Valley.

could not fill this need even under normal circumstances. Compounding this, the federal government had nationalized the railroads and placed them under considerably tighter security, preventing hobos from boarding and using trains as easily.

Government and non-governmental actors suggested various stopgap solutions for the shortages. Some proposed to bring in Chinese migrant workers to staff the fields, estimating that 50,000 of them could easily be obtained in time.¹⁸⁹ Others suggested taking soldiers from the military bases in Kansas to labor in the fields.¹⁹⁰ In the Dakotas, the state Secretary of Agriculture endorsed a proposal to enlist men in the army to serve solely in the harvest.¹⁹¹ Ultimately, these more unusual suggestions were discarded, but the end result was no less radical: extensive government intervention into every part of the labor supply chain.

This intervention took place at the regional or national level: the federal government centralized state employment offices' efforts, and secured rides for harvest workers through the railroads.¹⁹² A Joint Farm Labor Committee standardized wages at \$35-40 per month, allowed working boys and working women (the latter only on their families' own fields, indicating that flexibility was not limitless).¹⁹³ The key initiative was a vast network of public-private partnerships, with the government meeting with telephone companies to make communication free and easy, working with various recruitment organizations on the

¹⁸⁹ "Meeting of Farm Labor Committee," *The Hays Free Press* (Hays, KS), 3/28/1918, <https://chroniclingamerica.loc.gov/lccn/sn84029690/1918-03-28/ed-1/seq-8/>.

¹⁹⁰ "Draft Men to Harvest," *The Topeka State Journal* (Topeka, KS), 6/15/1918, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1918-06-15/ed-1/seq-7/>.

¹⁹¹ "Agan Approves Plan for Enlistment of Farm Labor," *The Fargo Forum and Daily Republican* (Fargo, ND), 4/14/1917, <https://chroniclingamerica.loc.gov/lccn/sn85042224/1917-04-14/ed-1/seq-1/>.

¹⁹² "Bainer is Helping," *The Topeka State Journal* (Topeka, KS), 6/4/1918, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1918-06-04/ed-1/seq-3/>.

¹⁹³ "Meeting of Farm Labor Committee," *The Hays Free Press* (Hays, KS), 3/28/1918.

ground, and posting and recruiting in a panoply of businesses: stores, groceries, furniture outlets, hardware stores, bakeries, and pool halls.¹⁹⁴ Government intervention here was considered vital, not just to stave off the apparently awful prospect of relying on Black labor from the South or tramp labor from cities, but also as a matter of patriotism.¹⁹⁵ Indeed, jingoism saturated the harvest. "The fighters can't eat the liberty bonds and Red Cross subscriptions," exhorted one journalist; another exclaimed that the "Binder Reel Is Humming Battle Hymn of Democracy."¹⁹⁶

But one side effect of all this jingoism was that the government did not hesitate to utterly crush anyone who stood in the way of the harvest—in this case, the I.W.W. In the war years, especially in 1917-1918, the government arrested those union members who attempted to organize harvest hands or agitate for better working conditions. These efforts escalated in 1917, when the imprisonment of I.W.W. organizers in Bisbee, Arizona, spurred nationwide strikes—and a threat to turn it general. Among harvest hands, these efforts once again centered in the Dakotas, as organizers paralyzed several wheat belt towns.¹⁹⁷ Lobbying

¹⁹⁴ "Free 'Phone Service," *The Topeka State Journal* (Topeka, KS), 6/12/1918, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1918-06-12/ed-1/seq-5/>; "Open Harvest Hand Stations," *Baxter Springs News* (Baxter Springs, KS), 6/7/1918, <https://chroniclingamerica.loc.gov/lccn/sn83040592/1918-06-07/ed-1/seq-5/>.

¹⁹⁵ "Eat Corn Bread," *The Topeka State Journal* (Topeka, KS), 5/7/1918, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1918-05-07/ed-1/seq-4/>.

¹⁹⁶ "Need 90,000 Men," *The Topeka State Journal* (Topeka, KS), 5/23/1918, and "Kansas Army of Harvest Hands in Biggest Drive," *The Topeka State Journal* (Topeka, KS), 6/12/1918, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1918-06-12/ed-1/seq-1/>.

¹⁹⁷ "South Dakota Plans to Meet I. W. W. Drive," *The Fargo Forum and Daily Republican* (Fargo, ND), 7/23/1917, <https://chroniclingamerica.loc.gov/lccn/sn85042224/1917-07-23/ed-1/seq-2/>; "Spink Is Ready for I. W. W. Gang," *The Mitchell Capital* (Mitchell, SD), 7/26/1917, <https://chroniclingamerica.loc.gov/lccn/sn2001063112/1917-07-26/ed-1/seq-1/>; "Nation-Wide Industrial Strike Is Threatened," *The Bismarck Tribune* (Bismarck, ND), 7/31/1917, <https://chroniclingamerica.loc.gov/lccn/sn85042243/1917-07-31/ed-1/seq-1/>; "Want \$4.50 Day at Jamestown; I. W. W. Gang Issues Ultimatum," *The Fargo Forum and Daily Republican* (Fargo, N.D.), 8/1/1917, <https://chroniclingamerica.loc.gov/lccn/sn85042224/1917-08-01/ed-1/seq-10/>; "Strike Sentiment Grows," *The Brookings Register* (Brookings, SD), 8/9/1917, <https://chroniclingamerica.loc.gov/lccn/sn85042792/1917-08-09/ed-1/seq-5/>; "I. W. W. Strike in Four States Fails," *The Oakes Times* (Oakes, ND), 8/23/1917,

by various industries, coupled with a suspicion that the I.W.W. pursued an antiwar agenda, finally led to the federal government leading a massive crackdown on the I.W.W. in September of 1917, the “Big Pinch,” arresting hundreds of members, raiding local chapters and seizing materials, records, and money nationwide.¹⁹⁸ Labor campaigns essentially disappeared during the war, and would only gradually resurface in the years after the war.¹⁹⁹

By and large, the system worked—it even worked a little *too* well. The region had no trouble bringing in the crop of 1918 and feeding the Entente. The state appeared to have ironed out vast inefficiencies in the labor system, such that in the lead up to the 1919 harvest season, well after the war, farmers suggested imitating some of its most successful practices: inter-state cooperation, standardized wages, and careful distribution of harvest hands.²⁰⁰ “The hit and miss travel of the harvest hands always looking for a higher wage which was being paid somewhere a litter [*sic.*] farther on, was largely eliminated in 1918.”²⁰¹

But farming on the Great Plains would not be so heavily regulated by the federal government for another decade. Farmers in the West were a progressive lot.²⁰² So, by and large, were the people who they employed. But even if the various constituencies didn’t seem terribly put off by the idea of the wartime conditions continuing, the government itself expressed no intention of doing so. The idea of using the state to simplify the mad scramble

<https://chroniclingamerica.loc.gov/lccn/sn87096017/1917-08-23/ed-1/seq-4/>; “Many Wobblies Reaching City,” *Grand Forks Herald* (Grand Forks, ND), 8/28/1917, <https://chroniclingamerica.loc.gov/lccn/sn85042414/1917-08-28/ed-1/seq-12/>.

¹⁹⁸ Higbie, pp. pp. 151-64; Dubofsky, pp. 376-422.

¹⁹⁹ Hall, *Harvest Wobblies*. Note that I.W.W. mentions still surface in newspapers in the Dakotas after the war, but that these are far more subdued than those before the war.

²⁰⁰ “Want Gov’t Roads,” *The Topeka State Journal* (Topeka, KS), 1/17/1919, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1919-01-17/ed-1/seq-10/>.

²⁰¹ “Wheat Growers Meet,” *The Topeka State Journal* (Topeka, KS), 4/18/1919, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1919-04-18/ed-1/seq-5/>.

²⁰² See again Sanders, *Roots of Reform*.

for harvest hands faded away, leaving little impact on the system in the 1920s. The same madcap antics of exchanging labor in an ad hoc, piecemeal fashion would continue, even as the next decade shook the very foundations of the hobo work regime.

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Conclusion

Sometime in the spring of 1922, sociologist Nels Anderson met an eighteen-year-old boy on the streets of Chicago. The boy had left his home in Dayton two years before, and since then, wandered extensively throughout the United States. But no matter how far he went, these journeys always seemed to lead him back to the same places: Chicago and the harvest fields of Kansas. When Anderson spoke to him that spring, he had already caught “the fever” of the harvest again—that itch to go see the country, work until his hands bled, and make money.²⁰³

But there was another draw. That first summer away from home, “He got into the company of a man who took a great deal of interest in him.”²⁰⁴ They shared train rides, shared food, and, eventually, shared a bed. “He says that he did not have another experience for a month or so,” but was approached again, “stayed two nights” with the new man, before he “got disgusted with himself and swore to travel alone from then on.”²⁰⁵ Despite a few other encounters, he returned home, and suppressed all thought of the matter. But he could not help but think about working the harvest again—in his words, he was seized with an

²⁰³ “Document 122,” Anderson, Burgess Papers, Box 127, Folder 5, p. 1.

²⁰⁴ “Document 122,” p. 1.

²⁰⁵ “Document 122,” p. 2.

“uneasiness,” one which finally spurred him to leave again. This time, in Kansas, his fears and doubts fell away. He actively sought the sex and companionship of his fellow migrants.²⁰⁶

There can be little doubt that harvest work took the bodies of those who did it and broke them. Reaping, stacking, and threshing all relied on human and animal muscles from start to finish; only in threshing and the transportation of grain did steam power come anywhere near the production of wheat. The short-term demand for muscles in the harvest, a capitalist drive towards profit, and, above all, the unpredictably variable climate specific to the Great Plains, all combined to produce a labor system that relied on ad hoc, precarious workers. Other systems were possible; the migrant work regime was not even one that plutocrats, politicians, or large landowners introduced deliberately. Rather, it was an emergent property of the many pieces of the Great Plains wheat harvest. It relied on the travel and destruction of poor bodies, often with a never-fulfilled promise that those who worked at it might earn enough to become farmers of their own. But it worked.

Yet in all this, it is important not to lose sight of the reasons the harvest nevertheless drew workers to it. Awful as it often was, migrant life offered an escape from the humdrum of everyday life. Though its participants were still enmeshed in wage labor systems to survive, they dreamed of ending them. Indeed, they fought fiercely to make the harvest work regime a fairer and more equitable place. Even with bloodshed, violence, and the constant precarity of a job that simply might not exist if a sudden shift of the weather destroyed grain fields, the workers still came. The hobo continued to play a central role in grain agriculture even into the 1930s. By then, however, changes had started to become apparent that would spell the doom of the harvest hand.

²⁰⁶ “Document 122,” p. 2.

In the next chapter, I explore how life *away* from work shaped migrant laborers. Here, too, climate was critical, as the cold and precarity of their life—along with the danger of navigating the built environment—pushed hobos constantly into partnerships, anarchic self-organization, and other radical circles. Far from being a vacation or relaxation away from their jobs, life in the winter held constant fear and anxiety, and it was only through the bonds of self-created community that hobos remained alive.

Chapter Three

Drifting: Idleness, Cold, and Radical Life

“He has no home, no relatives and no friends in America. Other people call him a hobo, but he calls himself just a common laborer belonging to the ranks which are roaming over the country.” Sam Gray had immigrated from Ireland more than a decade before his interview with a federal investigator in 1914, following rumors of better wages and a “better country.” He did have a trade—painting—“but very soon he noticed the danger of white lead poison—‘painter’s colic.’” Gray abandoned the industry, instead cutting ice or laying concrete or rails when he could. When he couldn’t, he wandered the city broke, “during which time he was helped out by his temporary friends—other laborers, whom he knew, and who continued to come in from work with money.” He was a socialist—he had read IWW pamphlets and attended meetings, but his support for them came more from his experiences with other men: how the lack of workplace safety had left many of them crippled and destitute, or how the wretched conditions in work camps made them into a kind of “hell,” where “Horses and cattle are kept much cleaner than human beings.” By the time of the interview, he was in a bad way, “worn out looking... He has done everything to get out of the position of a casual laborer in America, but has always failed. This is the reason he has lost all hopes and even his belief in God.”¹

In his progression through destitution, radicalism, and cynicism, Gray was hardly alone. In this chapter, I explore the relationship of hobo politics to their way of life, and

¹ Interview with Sam Gray, *U.S. Commission on Industrial Relations, 1912-1915: Unpublished Records of the Division of Research and Investigation: Reports, Staff Studies, and Background Research Materials*, microfilm collection, reel 6.

ultimately between politics and *space*. I argue that the complex seasonality of migratory life created spaces that facilitated the spread of radical thought among hobos. Many hobos saved enough from their summer hinterland jobs to “make a stake,” that is, to make it through the winter, when most jobs vanished. Then, because the built environment made it easier to survive winter in cities than in the countryside, and the limitations of steam-era transportation meant they could rarely escape to the south, they mostly returned east, to cities like Chicago. But the resulting seasonal movement meant hobos navigated necessarily extralegal and dangerous spaces, mastering numerous skills just to survive. The migrant spaces that emerged—in trains, camps, cities, and jails—fostered camaraderie, the exchange of radical ideas, and contempt for the capitalist system. It would be reductive to argue that “migrant life bred radicalism.” But hobos themselves thought that how one lived shaped one’s politics. And as this chapter makes clear, while radicalism was not environmentally *caused*—it emerged organically from within the hobo population or spread to it from outside—the environment *enabled* an exchange of radical thought among a population that might otherwise never have been exposed to it.

A wealth of work exists on the life of hobos outside of their jobs. Small town society, police, and corporations had few problems with hobos when they were employed—but when they were getting to and from a workplace, or simply surviving between their intermittent contracts, they faced a great deal more scrutiny. Moreover, hobos constructed their identity around the daring exploits of beating their way along a railroad, rather than the mundanities of work. Cultural studies of hobos show that their unconventional relationship to work made them one of society’s tallest lightning rods for anxiety about

masculinity.² Attempts to police their movement and turn them into more conventional male breadwinners marked some of the earliest expansions of the police force in American history.³ As caricatures, hobos made convenient foils for turn-of-the-century American ideas about gender, home, and “homelessness,” centered on their rejection (perceived and real) of consumption, work, and family.⁴ And the constant flirtation of hobo culture with radical leftism has drawn attention as well—though usually for their ultimate failure to successfully organize.⁵ Hobos, however, illustrate an important point about space and radicalism—that for all its worldmaking and worldbreaking powers, settler colonial capitalism still left open cracks in which radical and non-normative thought (in the late nineteenth century including virtually any advocacy for something beyond free market capitalism, or at most, basic government social welfare programs) could thrive. Literal space is critical here: environmental history often fails to take seriously the idea that reconfiguration of the landscape has major consequences for culture and ideas.⁶ Migrant workers lived very different lives from those of their more settled counterparts—it stands to reason that if environment reshapes one’s life, it also reshapes one’s ideas.

² Todd DePastino, *Citizen Hobo: How a Century of Homelessness Shaped America* (Chicago: University of Chicago Press, 2003), pp. 81-91; Frank Higbie, *Indispensable Outcasts: Hobo Workers and Community in the American Midwest, 1880-1930* (Urbana, Illinois: University of Illinois Press, 2003), pp. 172-203.

³ Margot Canady, *The Straight State: Sexuality and Citizenship in Twentieth Century America* (Princeton, New Jersey: Princeton University Press, 2011), pp. 91-134; Kelly Lytle Hernández, *City of Inmates: Conquest, Rebellion, and the Rise of Human Caging in Los Angeles, 1771-1965* (Chapel Hill, North Carolina: University of North Carolina Press, 2017), pp. 45-63.

⁴ DePastino, *Citizen Hobo*. See also Amy Dru Stanley, *From Bondage to Contract: Wage Labor, Marriage, and the Market in the Age of Slave Emancipation* (New York: Cambridge University Press, 1998), pp. 98-137.

⁵ Nigel Anthony Sellars, *Oil, Wheat, and Wobblies: The Industrial Workers of the World in Oklahoma, 1905-1930* (Norman, Oklahoma: Oklahoma University Press, 2012); Greg Hall, *Harvest Wobblies: The Industrial Workers of the World and Agricultural Laborers in the American West, 1905-1930* (Corvallis, Oregon: Oregon State University Press, 2001).

⁶ One notable exception is Timothy LeCain, *The Matter of History: How Things Create the Past* (New York: Cambridge UP, 2017).

This chapter gradually telescopes out through hobo life and thought. I begin with the highly intimate sphere of mentorship and anonymous camaraderie between individual hobos traveling across the landscape, showing that the lessons older hobos passed to younger peers were necessary in a dangerous world—containing ideological lessons they believed to be just as necessary for survival. I then examine hobo life in temporary work camps and in seedier districts of cities, and how each acted to culture the exchange of radical ideas. I conclude by treating hobo radicalism in the broader context of American radicalism over time, and its implications for that larger field. By exploring hobo narratives, interviews with the sociologist Nels Anderson, and the vivid images captured by contemporary photographers, it is possible to reconstruct a world that existed far outside the traditional lanes of American life—a story that seems particularly important in the present day.

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Riding the Rails

Few hobos became hobos alone. In the many stories, narratives, and interviews hobos left behind, most parts of their narratives varied widely: why they left (lack of work, unhappy marriages, abusive parents, a sense of rootlessness), where they were going (small towns, big cities), and what jobs they worked (lumberjack, harvest hand, miner). But one element surfaces in virtually all of them: early in a hobo's journeys, an older hobo took them under their wing.

One of the most detailed of these stories comes from William Edge, a writer who traveled around the country to document poverty in the late 1910s, and his companion "Slim." Edge worked a boring industrial job painting stoves in a Cleveland factory, a seemingly eternal dawn to dusk grind during the First World War, before being approached

by Slim. Slim worked across the industrial park, striking up random conversations over dinner at the barracks. Then one day, utterly unprompted, he asked: “Say, yah know, I said we oughta go to a show together. Whadya say tomorrow night?”⁷ Edge, curious, agreed—and became all the more curious when the show turned out to be “one of the finest plays given in Cleveland during the early part of 1918.”⁸ His fascination with the man was palpable: “My amazement and confusion grew as he continued speaking. He spoke of Alexander Hamilton, of the adoption of the Constitution, of George Washington and Thomas Jefferson. He spoke in a peculiar, jumbled way, mixing in rough, workers’ speech with the vocabulary of science and of the academic historian. He spoke grammatically.”⁹ It was an utterly perplexing find, a man who ate “sloppily,” while speaking in detail about Hamilton’s financial system—“but under the circumstances, no other financial policy was compatible with the... of course, the son of a bitch made plenty of jack out of his lousey plan.”¹⁰ When Edge asked him why Slim was in this factory—“You’re not the ignorant laborer you pose to be,”—Slim replied, “Why are *you* here? Love affair? Fight with dad? Knock a guy down? Knock a girl up? You don’t belong here either... No, I don’t mean that I want an answer from you. I don’t care a damn why you’re here. I just meant that I, like you perhaps, have certain reasons for being here.”¹¹

Slim took Edge to the play, mocked the rich who had bought seats in the orchestra section and applauded at everything (“The people down there... come here because it is the correct thing to do. The people up here [in the peanut gallery] come because they really want

⁷ William Edge, *The Main Stem* (New York: Vanguard Press, 1927); online edition HathiTrust, accessed 1/15/2021, <https://babel.hathitrust.org/cgi/pt?id=mdp.39015004046689>, p. 3.

⁸ Edge, *The Main Stem*, p. 4.

⁹ Edge, *The Main Stem*, p. 4.

¹⁰ Edge, *The Main Stem*, pp. 3-4.

¹¹ Edge, *The Main Stem*, pp. 4-5.

to. The critical intelligences are with us in the loft.”¹²), then took him to the meeting of a chapter of the IWW—in which Slim stood up and challenged the IWW policy of direct action as misguided.¹³ Slim turned out to be an ex-lawyer who had passed the bar but never practiced, one who simply didn’t accept the life that awaited him. Edge was infatuated. And when Slim—a hobo, a man who never stayed in any one job for long—decided to leave Cleveland to tramp around the East Coast, Edge asked him if he could come along. So began Edge’s education as a migratory worker.¹⁴

Together, Edge and his tutor Slim traveled through Pittsburgh, Baltimore, and New York City. Slim taught him to evade police on the railroad, to beg properly for food, to suss out information from other bums, to look for work at the right agencies without getting thrown out by the police, to fight, and where to sleep. He fretted about Edge’s cavalier behavior, telling Edge to exercise caution when plotting something like a strike: “You haven’t yet developed the proper cautions for a migratory worker. You have a sort of open and above-board way of doing things that attracts attention and sometimes makes me fear for our safety. Strikes are dangerous things; they stir up hatred and like negro lynchings, depend upon the instability of the mob mind. The least false motion may cost somebody his life.”¹⁵ They worked jobs together, stole train rides together, and talked constantly of the feasibility of socialist policies and of the injustices of capitalism. In a two-hundred-page book, their relationship takes up more than half the text.

¹² Edge, *The Main Stem*, p. 5.

¹³ Edge, *The Main Stem*, pp. 12-3.

¹⁴ Edge, *The Main Stem*, pp. 8-9.

¹⁵ Edge, *The Main Stem*, p. 95.

Then, as the days wore on, their friendship wore thin. Slim had a playful, teasing nature, and Edge grew more and more impatient with it—until the two finally came to blows. They apologized, and continued to live together and talk, but their conversations grew more guarded—and then, quite suddenly, Edge returned to their hostel to find Slim gone.¹⁶ Edge now beat the road alone, but Slim had left contact instructions, and the two wrote letters back and forth constantly. For his part, Edge ended up taking Charlie, a young, naïve man of his own, under his wing, and both unconsciously and consciously found himself echoing Slim, teaching the youngster the vocabulary and practices of a hobo, teaching him to evade the police, fearing for their safety, and so on.¹⁷ Months later, the two eventually reconnected with Slim.

But the time apart had somewhat lessened Edge's infatuation: "Our long separation had permitted me to look at him in a new light. He was brilliant. But why at his age, had he not done something more worthwhile than mere wandering?"¹⁸ They planned a grand railroad trip out West, beating their way to see places Edge had never before been. But the question haunted him: was Slim doomed to stay this way forever? When Edge brought it up, Slim replied with characteristic eloquence and flippancy: "As I see it, there are two ways of living in our present economic system. You belong either to a group which has to kneel before certain gods, conform to certain folkways, or you do not."¹⁹ It was very nearly the last moment the two had together—on the next job they took, Edge fell ill with the Spanish flu.

¹⁶ Edge, *The Main Stem*, p. 134.

¹⁷ Edge, *The Main Stem*, pp.153-5.

¹⁸ Edge, *The Main Stem*, p. 187.

¹⁹ Edge, *The Main Stem*, pp. 197-8.

Charlie and Slim decided to go on without him, telling him that he ought to recover with his family back east—that it was time for him to return.²⁰

Slim was quite well-educated for a hobo, but certainly not uniquely so. Many who began their wanderings commented on the curious combination of eloquent anti-capitalism mixed with vulgarity and colloquialisms which hobos seemed to speak with.²¹ Most hobos read constantly, and Hamilton, Jefferson, and socialist theorists were far from unusual in their diet of books.²² And an older hobo mentoring a younger one, ensuring the passage of hobo slang, customs and practices, rituals, and strategies for survival—this was a constant feature of the road. Edge had “Slim.” Reitman’s semi-autobiographical heroine Bertha had “Fat.”²³ Nels Anderson had his father and brother Bill.²⁴ While few hobo friendships lasted long—or even exchanged real names—most migrants found one or more older hobos to guide them in their early going.²⁵ They had to.

Most hobos headed West by railroad, but doing so as many did—illegally—was fraught with danger. There were a dizzying array of hiding places that were hard for police or railroad security to monitor: inside a boxcar, “blind baggage” (i.e. without entrances to the front and back, limiting escape), clinging to its roof, riding in the space between cars, riding

²⁰ Edge, *The Main Stem*, pp. 207-8.

²¹ Nels Anderson, *On Hoboes and Homelessness*, Raffaele Rauty, ed. (Chicago: University of Chicago Press, 1998), pp. 46-7; Barbara Starke, *Touch and Go: The Story of a Girl's Escape* (London: Jonathan Cape, 1931), pp. 260-4.

²² Starke, *Touch and Go*, p. 261; Nels Anderson, “Document 150,” Ernest Watson Burgess Papers, Box 127, Folder 5, University of Chicago—Special Collections, Chicago, IL.

²³ Boxcar Bertha (pseudonym, Benjamin Reitman), *Sister of the Road: The Autobiography of Boxcar Bertha* (Oakland, California: AK Press, 2002 (orig. pub., 1937)), pp. 24-5.

²⁴ Nels Anderson, *The American Hobo: An Autobiography* (Leiden, Netherlands: E. J. Brill, 1975), pp. 1-67.

²⁵ See also: Horatio Alger, *Tony, the Hero; or, A Brave Boy's Adventures With a Tramp* (New York: A.L. Burt, 1890), <https://babel.hathitrust.org/cgi/pt?id=nc01.ark:/13960/t8x938d09>; John Peele, *From North Carolina to southern California without a ticket, and how I did it* (Tarboro (?), North Carolina: Edwards & Broughton Print. Co., 1907), <https://catalog.hathitrust.org/Record/010937552>, pp. 32-51; William Staats, *A Tight Squeeze: Or, The Adventures of a Gentleman* (Boston: Lee and Shepard, 1879), <https://books.google.com/books?id=vrZLAQAAMAAJ>, pp. 29-35.

underneath cars in the undercarriage, and riding the brakebeam (directly above the train tracks, with pebbles, dirt, and dust spitting in one's face).²⁶ Catching these trains, ideally at uphill, sidings, crossings, curves, or near stations—anywhere a train slowed down—required a lot of luck even for an experienced hobo, and quite a lot of daring and nerve. Nels Anderson received extensive mentoring on how to catch a train going at speed.²⁷ He was far from the only one to require aid. Take William Staats, who recalled how “The Evangelist” taught him not to get discouraged after being caught: “‘Wait for another train!’ exclaimed the Evangelist. ‘Certainly not, why we have only been bounced twice!’” Staats then walked with him between cars as the train gathered speed, started to run, and only at the last possible second grabbed a ladder and jumped aboard, waiting to climb atop it until the train crew’s lanterns stopped sweeping the roof.²⁸ Or the notorious “A-No. 1”, who first learned to lie on the wooden brakebeam from his companion, “Frenchy:” “...I nearly fainted. Frenchy had no time to lose talking about it, however, but just grabbed me and made me sit down on the beam. To encourage me, he sat on the same one and warned me to hold on.” Amidst the dust, the noise, the sand and rocks, A-No. 1 and his friend managed to ride ten miles completely out of sight.²⁹

²⁶ Jack London, *The Road* (New York: MacMillan Co., 1916), https://books.google.com/books?id=d5vyx_WYEpoC, pp. 25-52.

²⁷ Anderson, *American Hobo*, pp. 91-3.

²⁸ Staats, *A Tight Squeeze*, p. 14.

²⁹ A-No. 1, [pseudo.] *Life and Adventures of A-No.1, America's Most Celebrated Tramp, Written by Himself* (Cambridge Springs, Pennsylvania: The A-No. 1 Publishing Co., 1910), pp. 36-7.

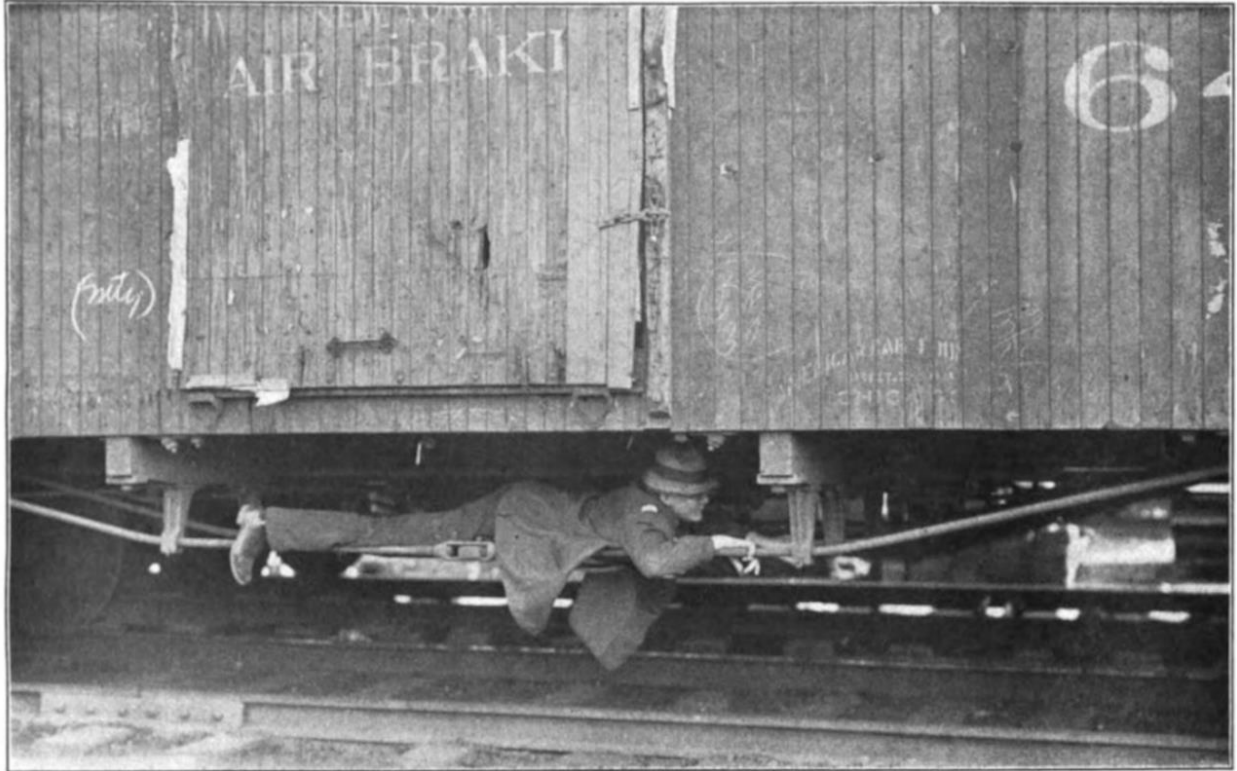


Figure 14. Photograph: Posed Image of Jack London Riding the Rods. SOURCE: Jack London, *The Road* (New York: MacMillan Co., 1916), leaf after 24.

Even after successfully navigating the built environment, most hobos still faced massive challenges from the unbuilt environment of climate and nonhuman life. Chief among these was the simple, blunt fact of cold. Train cars meant for cattle—or worse—grain, had no active heating. Other cars—some of the fastest trains one could catch, like a citrus freight from California—had active refrigeration, which hobos were known to brave.³⁰ An experienced hobo might dare to set a fire in a car, but this posed its own, obvious dangers.³¹ Otherwise, hobos usually huddled together for warmth, as one hobo, Harry Kemp, recalled in a vivid memoir: “It struck chilly, one night. So chilly that we went into the freight yard to put up in an empty boxcar... There were many other men already there, which was good; the

³⁰ Windy Bill (pseudo., Ben Goodkind), *A Poor American in Ireland and Scotland* (San Francisco: W. S. Van Cott & Co., 1913), Google Books, accessed 2/24/2021, <https://books.google.com/books?id=FR51AAAAIAAJ>, p. 96.

³¹ Goodkind, *A Poor American in Ireland and Scotland*, p. 47.

animal heat of their bodies made the interior warmer.”³² The stink, Kemp wrote, was unbelievable; for fear of their boots being stolen, they used them as pillows and wrapped their feet in newspapers. Unfortunately for him and his friends, their huddling made them easier to discover—the railroad police apprehended them early that morning.³³ The popular writer and hobo Jim Tully provides another illustrative glimpse of the banal ubiquity of cold: a -20F night near Alpena, Michigan, in which the local police had provided a single heated caboose for hobos. While they waited out the night, they speculated about the fates of hypothetical hobos on passing trains: “Don’t worry your potato soul,” advised one character, ‘One Leg:’ “They ain’t no smart ‘boes ridin’ freights tonight. And them that ain’t smart—well, the deader the better. Too many dumb ones on the road already.”³⁴ As is still usually the case in today’s America, freezing to death was nothing more than the expected outcome of homelessness—it needed hardly any justification.

Even when the cold retreated, hunger dogged hobos. Begging was straightforward in urban neighborhoods where the police were more tolerant. In smaller towns or rural areas, on the other hand, the police could be quite vigilant. In still more rural areas, getting food could be impossible. In one instance, a government investigator in the wheat fields of South Dakota found two boys by a creek outside a small town, eating catfish. His notes capture the desperation of the inexperienced pair: “Freighted here, Redfield. 5 days here without work. All money is gone. They get their livelihood by begging and fishing, have not stolen anything. Both boys depressed. No work, no money, can't go back; they could freight Westward, but

³² Harry Kemp, *Tramping on Life: An Autobiographical Narrative*, 1922, in Iain McIntyre, ed., *On the Fly! Hobo Literature and Songs, 1879-1941* (Oakland, California: PM Press, 2018), p. 114.

³³ Kemp, *Tramping on Life*, pp. 114-5.

³⁴ Jim Tully, "Thieves and Vagabonds," originally in *American Mercury*, in McIntyre, *On the Fly!* pp. 139-141; quote from p. 140.

not Eastward." Eastward rails, towards home, cost a dollar per section to bribe the section hands who were charged with putting off stowaways. The creek's catfish were the only food they'd found in the area.³⁵

Even the successful navigation of the environment still exposed hobos to police brutality. Beatings, arbitrary arrests, and shootings defined life on the road—and police departments usually answered complaints "by making a public statement that the victim had 'a record' and was well known to the police."³⁶ Younger hobos sometimes found their mentors smoothing over potential moments of trouble, offering bribes, finding trains or towns with less aggressive policemen, appealing to their shared experience as workers, or sometimes drawing away the attention of the police entirely to keep eyes off a young hobo.³⁷

The most important service that traveling in pairs seemed to bring, though, was convincing a new hobo that bumming a ride was doable, that evading the police was easy, and that lawbreaking did not violate some absolute morality, but only arbitrary rules. As Edge learned from his hobo companion, migrant workers had only "indifference to a jail sentence. A few months in jail was to them a debt they owed to society in order that they might ply their trade, as one pays income tax."³⁸ What others saw as dangerous was just a prerequisite for hobo life. More than one new hobo walked confidently into a courtroom, expecting to be heard out. "I had credentials in my pocket proving that I had come direct from one job in search of another. By no stretch of the imagination could I be charged with breaking any law... I almost fancied the court making me a handsome apology and rebuking

³⁵ Interview with Joseph Burke, USCIR unpublished notes.

³⁶ Edwin Brown, *"Broke:" The Man Without the Dime*, (Boston: The Four Seas Company, 1920 (orig. 1913)), <https://books.google.com/books?id=8qhGAAAAIAAJ>, p. 18.

³⁷ Reitman, *Sister of the Road*, pp. 25-8.

³⁸ Edge, *The Main Stem*, p. 122.

the policeman for my utterly unwarranted arrest.”³⁹ Such fantasies were almost always dashed. Instead, they usually exited with a newfound distaste for the judicial system—a belief that it was anything but fair. In their eyes, society punished the hobo for merely getting to work, and being without a place to stay between jobs.

Young hobos needed tutoring, in short, to evade the dangers of the road, to deal with an unpredictability that was ultimately rooted in nature. The tightly regulated and ruled world of hobo movement posed danger to life and limb, not to mention myriad exploitative practices that could be avoided if you knew the right questions to ask and places to go. Mentorship helped mitigate all these dangers. But crucially, what ended up being passed on was not simply ways of working and living—but ways of thinking, as well. Note again the lessons that Slim taught Edge, right alongside his practical lessons: to distrust the system and the authorities, to stick up for fellow migrants, to accept a fellow hobo, no questions asked about his reasons for tramping—and above all, that a hobo had a unique, enlightened way of seeing the country. Alongside the lessons offered by Frenchy, Fat, and the others quoted above were many others: taxonomies of tramps, highlighting mutual aid and a work ethic insisting that those who worked deserved the spoils; migration as a way to transform one into a more moral character; that the country was fundamentally broken.⁴⁰ All of these lessons were judged to be of equal importance to practical skills—indeed, they were themselves practical skills. All of them shaped the world tramps then built for themselves.

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³⁹ D. M. C., "Siberian Methods in the United States: Schuettler's Spring Drive," *Hobo News*, 8/1917, in McIntyre, *On the Fly!*, p. 250.

⁴⁰ On tramp taxonomy, mutual aid, and work ethic: A-No. 1, *Life and Adventures of A-No.1*, p. 33; on migration and character and the brokenness of the county, Edge, *The Main Stem*, pp. 6-7.

Jungle Government

The man stood accused of robbery. “Hi-jacking”—robbing a sleeping hobo—was detested by hobos everywhere, but in the jungle, it was a particularly great crime. On the road, they feared—perhaps even expected—getting robbed; stealing train rides meant that no authority could be expected to come to their defense. But the hobo’s camp was supposed to be a safe place, built on a mutual understanding that these men and women lived on one side of a thin line between life and starvation. These camps—“jungles”—faced a myriad of challenges; reliant on mutual support, they had their own customs, their own laws, and even their own political system. For this particular hi-jacker, discovered in the act by his fellow hobos, justice would come swiftly.

A. W. Dragstedt, later secretary of the “Hobo College” of Chicago, later recalled watching the trial with interest.⁴¹ “Cries of ‘Burn the-----’ and ‘Let us hang him!’ are heard from all sides. A council is hurriedly called, a chairman is selected, motions are made with amendments and substitutes. After a short discussion a vote is taken to give him a whipping.”⁴² Such an ad hoc democratic council was hardly unusual—one had met earlier that very same day to discuss whether or not to relocate the camp in the face of a police raid; self-appointed committees often dispensed justice for breaking the unwritten rules.⁴³ On the job, exploitation and capitalism permeated hobo life; in the jungle and on the road, their days instead displayed startling horizontality and fluidity.

In keeping with their almost exclusively horizontal organization, jungles were extremely flexible, and uniquely inclusive by the standards of contemporary American

⁴¹ Anderson, *On Hoboes and Homelessness*, p. 49.

⁴² Anderson, *On Hoboes and Homelessness*, p. 48.

⁴³ Anderson, *On Hoboes and Homelessness*, pp. 45-7.

spaces. Most jungles were impermanent affairs, appearing or disappearing by the railroad side in a town in a couple of days, attracting a few passers-by before vanishing with the turn of weekly job demand. Others became sprawling camps, their fires tended continuously by at least one or two hobos even on a busy work day, gaining numbers towards nightfall into the several dozens. A few became the home of hundreds of hobos. In these largest ones, women might work as cooks and medics. (Most women on the radical fringe of society, however, appear to have circulated through different spaces.) Men ran the gamut from the old to the young, those with particular trades and those with few if any skills valued by employers. By and large, workers took care of each other, sharing food, freely giving money or provisions to those who for some reason could not provide for themselves. Most jungles appear to have had no color line whatsoever. And as suggested by Slim's set of questions to Edge above—"Why are you here? [...] No, I don't mean that I want an answer from you."—no one was ever particularly concerned with why another hobo had joined the camp.⁴⁴ Indeed, Nels Anderson notes that it was something of a taboo to probe too deeply into another migrant's past; he repeatedly commented on the difficulty of getting any of them to open up in his study of the causes and methods of migration.⁴⁵ Jungles were the same way: no one asked each other about their past, or why they were there. No one spoke or sang or told stories of lost loves, of broken families, of difficulty working. Most of the time, no one knew anyone else's name.⁴⁶

⁴⁴ Anderson, *On Hoboes and Homelessness*, p. 44.

⁴⁵ Nels Anderson, "Document 24," Ernest Watson Burgess Papers, Box 127, Folder 5, University of Chicago—Special Collections, Chicago, IL.

⁴⁶ Anderson, *On Hoboes and Homelessness*, p. 44.

Instead, men exchanged scant scraps of purely utilitarian personal information: where they were coming from or going, how the roads were there, how well-policed these roads were, where the jobs were, what conditions were like for begging. They told tall tales or of daring exploits, dirty jokes or stories of the road.⁴⁷ They graffitied fenceposts, signposts, the sides of shacks and buildings with symbols purported to hold secret messages for those initiated into their art: do not beg here—vicious dog; kind housewife; will exchange food for labor; police.⁴⁸

In lieu of the personal, hobos debated constantly. The politics on display always veered left: “Papers and pamphlets are distributed, union cards are taken out; business meetings are held to decide policies and actions, how to get the next meal or how to win the battle between labor and capital.”⁴⁹ Most hobos had an opinion of the IWW, the radical left union dedicated to the complete abolition of capitalism and the reorganization of the state under various centralized syndicates. At the time of Anderson’s survey, about half had joined the union.⁵⁰ (The IWW was eventually the target of a massive, coordinated campaign between corporations and federal law enforcement near the end of World War One, crippling the union’s capacity for organization, including among hobos.⁵¹) Indeed, some of the hobos who refused to join the IWW underlined that it was not “radical” enough for their tastes.⁵²

⁴⁷ Anderson, *On Hoboes and Homelessness*, pp. 46-7.

⁴⁸ Stan Richards and Associates, *Hobo Signs* (New York: Barlenmir House, 1974); see also, “SSoIH Databank of Hobo Signs and sources,” *Secret Society of Internet Hobos*, accessed 2/26/2021, <https://ssoih.com/signdb.html> for a remarkably well-sourced set of digital images, despite the organizational name.

⁴⁹ Anderson, *On Hoboes and Homelessness*, pp. 46-47.

⁵⁰ Anderson, *On Hoboes and Homelessness*, p. 82.

⁵¹ DePastino, *Citizen Hobo*, pp. 105-8; Melvin Dubofsky, *We Shall Be All: A History of the Industrial Workers of the World* (Chicago: Quadrangle Books, 1969), pp. 376-444.

⁵² Nels Anderson, “Document 37,” Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago—Special Collections, Chicago, IL.

Even the wide tolerance displayed at the jungle had its limits, however. Hobos had their own taxonomy for migrants, one which appears to have been in flux over time, but by the 1910s had settled on three broad categories: hobos (who moved to work), tramps (who worked to support their wandering), and bums (“non-migratory non-workers”). Though all three might circulate through jungles, and contribute to their camps by begging food and money from nearby “tank towns” or cooking and cleaning, and all shared food, alcohol, and other valuable resources, bums were often viewed with suspicion, particularly bums who began to haunt jungles for long periods without ever working. Many hobos attempted to help “buzzards” or “stew bums” only occasionally or not at all, and they were often suspected of thieving or mooching continuously.⁵³ Hobos had to cook and clean for themselves, and, contrary to the expectations and stereotyping of the public, every hobo account noted how fastidious and careful hobos were to keep their persons and clothing tidy.⁵⁴ Such domestic tasks, in contradicting those expectations, instead contributed to perceptions of migrant workers as less-than-masculine. They were, of course, necessary for survival, particularly in the smaller jungles, and the simple but filling “mulligan stew” (beef, potatoes, and onions) became a notorious hobo staple.⁵⁵ The best cookware was a valuable commodity, with one of the more common jungle crimes being its destruction or misplacement.⁵⁶ Therefore, though self-organizing quasi-communist ethos of the jungle extended beyond the ad hoc councils, it did have its limits.

⁵³ Anderson, *On Hoboes and Homelessness*, p. 45; Goodkind, *A Poor American in Ireland and Scotland*, p. 48.

⁵⁴ Anderson, *On Hoboes and Homelessness*, p. 43.

⁵⁵ Anderson, *On Hoboes and Homelessness*, p. 43.

⁵⁶ Anderson, *On Hoboes and Homelessness*, p. 45.



Figure 15. Photograph: A Hobo Jungle, 1895. In many photographs of hobo jungles, men avoid eye contact with the camera—here, a great deal of trust is implied. Note that the men share food out of a single stewpot, are clean and well-kempt. Note the trees in the background—ubiquitous in jungles. SOURCE: Iain McIntyre, *On the Fly! Hobo Literature and Songs, 1879-1941* (Oakland, California: PM Press, 2018), p. 21.

The jungle served as a perfect adaptation to the Western work regime. Hobos had very little money, and virtually no certainty about when or where they would get their next paycheck. A legal regime quite determined to push those who had no work out of a community contributed, too—staying in a town was out of the question, if there was no work. In other words, jungles allowed workers to access many points in the vicinity while remaining out of the eye of local authorities; they provided privacy without sacrificing flexibility. By definition, then, they existed beyond the ambit of normal systems of authority—there could be no appeal to police or judges, even if a hobo might want one. Hobos opted for consensus-based democratic processes partly because there was little recourse to American society’s usual mechanisms of coercion—and partly because these processes aligned with the politics of itinerant workers much more broadly.

Each of the above factors shaped where jungles were located. Always next to a railroad, ideally by a slow point, in and among trees for fuelwood, shade, windbreaks, and concealment, near running fresh water for washing, cooking, and drinking, they were sited close to town for access to aid, but outside city limits to avoid falling within the jurisdiction of police.⁵⁷ This same geography, and these same factors, would have made the jungles a nightmare in winter: too far from town in emergencies, and without the infrastructure to support a year-round population. Jungles acted only as temporary points of rest—and incidental contact with radical ideas—and hobos made no attempt to remain. Rather, most hobos overwintered in the cities.

⁵⁷ Kemp, *Tramping on Life*, p. 114.

The case study of one Kansas jungle aptly illustrates many of these trends. Discovered by a policeman searching for a group of store robbers among harvest hands, its population was enormous by hobo standards—nearly 300 strong. Swollen by a poor harvest, the camp lay by the town of Ellsworth, between the river and railroad, hidden by a band of trees that still stands today.⁵⁸ Its position was ideal: trains picking up speed as they exited the town would be just slow enough to catch on foot, and would be headed for the heart of the Central Kansas wheat belt; the river provided fresh water for drinking and cleaning. The camp made regular, organized foraging attempts into surrounding fields, sharing in the spoils of chickens and potatoes secured by a few of their numbers (and in return, local farmers assaulted camp members with the tacit consent of local police, media, and public). Majority black, a startled journalist reported the multi-ethnic “socialist” camp “is governed by a committee selected by the tramps and in this committee is vested the civil government of the camp. Except for stealing chickens, potatoes, and other provisions, no depredations have been committed that anyone knows of in that neighborhood.”⁵⁹ The Ellsworth jungle took advantage of geography to avoid surveillance while simultaneously facilitating worker movement throughout the wheat belt.

As for the hi-jacker we opened the section with, his sentence of whipping awaited only someone to carry it out. When the council asked for a volunteer, a long silence followed. No one, it transpired, actually wanted to whip the suspected thief. As such, the council quickly commuted his sentence, to one of fisticuffs with another hobo nearby, much larger.

⁵⁸ The adjacent forest, railroad, and river is still visible on Google Maps; see *Google Maps*, accessed 2/12/2021, <https://www.google.com/maps/@38.7311363,-98.2431534,6110m/data=!3m1!1e3>.

⁵⁹ The story and quotes are taken from “‘Harvest Hands’ Establish a Camp at Ellsworth,” *The Topeka State Journal* (Topeka, KS), 7/2/1904, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1904-07-02/ed-1/seq-2/>, p. 2.

The fight was nothing less than efficient—the hi-jacker was helped up after being knocked out, and the hobos went on with their day.⁶⁰ Though this was, of course, only one example out of hundreds that must have occurred every year, it is certainly striking that corporal punishment fizzled out for want of someone willing to implement it—that hobos refused to carry out the sort of sentence they would so often face from authorities. The whipping deferred speaks, once again, to the extreme horizontality of hobos' self-organization. What, then, did their world look like when they returned to the cities?

*** **

Marxist Drifters

“Now get this through your heads. I am making it simple so that you can understand it.” These words were heard by many a hobo, spoken by a radical Marxist organizer, Daniel Horsley. By the time he had settled down as the owner of a bookstore in Chicago in the late 1910s, Horsley was likely one of the most well-traveled men in America. Living as a coal miner, traveling photographer, a shipbuilder, and a lumberjack, he had seen most of the Great Plains, the Rockies, the Eastern seaboard, and the North Woods. But he left all that behind to run “The Proletariat,” an outlet for radical literature and a hobo waystation in Chicago. Homeless ‘bos would leave their things there for safekeeping, list it as an address for their mail, and meet their friends under its roof. Horsley used it as a way to spread the teachings of Karl Marx to an otherwise unreachable population. The Proletariat was an epicenter of life for some of the region’s most transient workers.⁶¹

⁶⁰ Anderson, *On Hoboes and Homelessness*, p. 48.

⁶¹ “Document 22,” Ernest Burgess Watson Papers.

In rural areas, hobos seemingly came and went with the seasons. They appeared out of nowhere, slept in a guest bedroom, a barn, or out of sight, worked for a few days or weeks, lingered perhaps a little long, and then vanished back into nowhere. The same metanarrative describes how most hobos saw themselves: in popular accounts, they heaped attention on the dangerous railway journey, the encounters with policemen, stories of strokes of luck and misfortune, and the new sights and sounds encountered in different places along the road. Moving through a city, by contrast, was deeply unglamorous, dangerous, dirty, and boring. Yet it is assuredly true that the vast majority of hobos spent long stretches of their year in city life. In this section, I explore three key roles of the city for migrant workers: to give them outlets for cheap food and entertainment, to connect hobos to work and to their families, and perhaps most importantly to protect them from the fearsome winters of the Great Plains. Arguably, in these capacities, cities acted as enormous homeless shelters.

For many hobos—it is hard to determine how many—the goal of any steady summer job was “making a stake:” making enough money to live through the winter when work was scarce.⁶² In the late nineteenth and early twentieth century, this seemed to require at least forty or fifty dollars (with the average good meal running from five to thirty cents).⁶³ In a pattern that will be familiar, migrant workers who managed to scrape together the money left the countryside in winter and returned to cities. Chicago, by any measure the most important city to hobo life and culture, saw its homeless population in the early 1920s fluctuate between thirty and seventy-five thousand through the year—about two thirds of

⁶² Brown, *Broke*, p. 207.

⁶³ See the wages for harvest work, broadly considered to make an ideal stake, in the previous chapter. For the price of a “coffee and,” see Brown, *Broke*, p. 29, and Nels Anderson, “Document 135,” Ernest Watson Burgess Papers, Box 127, Folder 4, University of Chicago—Special Collections, Chicago, IL.

whom were not permanent residents of the city.⁶⁴ Even these numbers dramatically understate Chicago's status as a hobo haven: Nels Anderson estimated that about 500,000 migrant workers circulated through the city each year, roughly equivalent to 20% of the city's total resident population.⁶⁵ Other cities weren't quite as central, but "Hobohemias" could be found in most.⁶⁶ In each of these cities, both the homeless population and those living in temporary "flophouses" swelled during the winter months.

For the most part, they were going to the "main stem." Also called the "main drag," this was the area directly abutting the railyards—and it was where hobos took their rest. Homeowners in these areas were used to migrants begging for food or money, and gave them frequent aid; the built environment of single-family homes made approaching and soliciting families for food and work easy. Meanwhile, the concentration of hobos near the tracks meant that employment agencies, cheap food, and cheap lodging—all the necessities of hobo life—were close at hand in the main stem. Here, too, people were quite willing to offer directions to a homeless beggar. As the map below, based heavily on observations by the sociologist Nels Anderson, shows, it is hard to overstate how concentrated these activities were. From the freight yards between the old slaughterhouse district (Bridgeport) and downtown, one could find virtually the entire life of hobos within a couple of miles.⁶⁷

⁶⁴ Anderson, *On Hoboes and Homelessness*, p. 32.

⁶⁵ Anderson, *On Hoboes and Homelessness*, p. 32.

⁶⁶ Anderson, *On Hoboes and Homelessness*, p. 33; see also Higbie, *Indispensable Outcasts*, p. 34.

⁶⁷ Anderson, *On Hoboes and Homelessness*, p. 33.

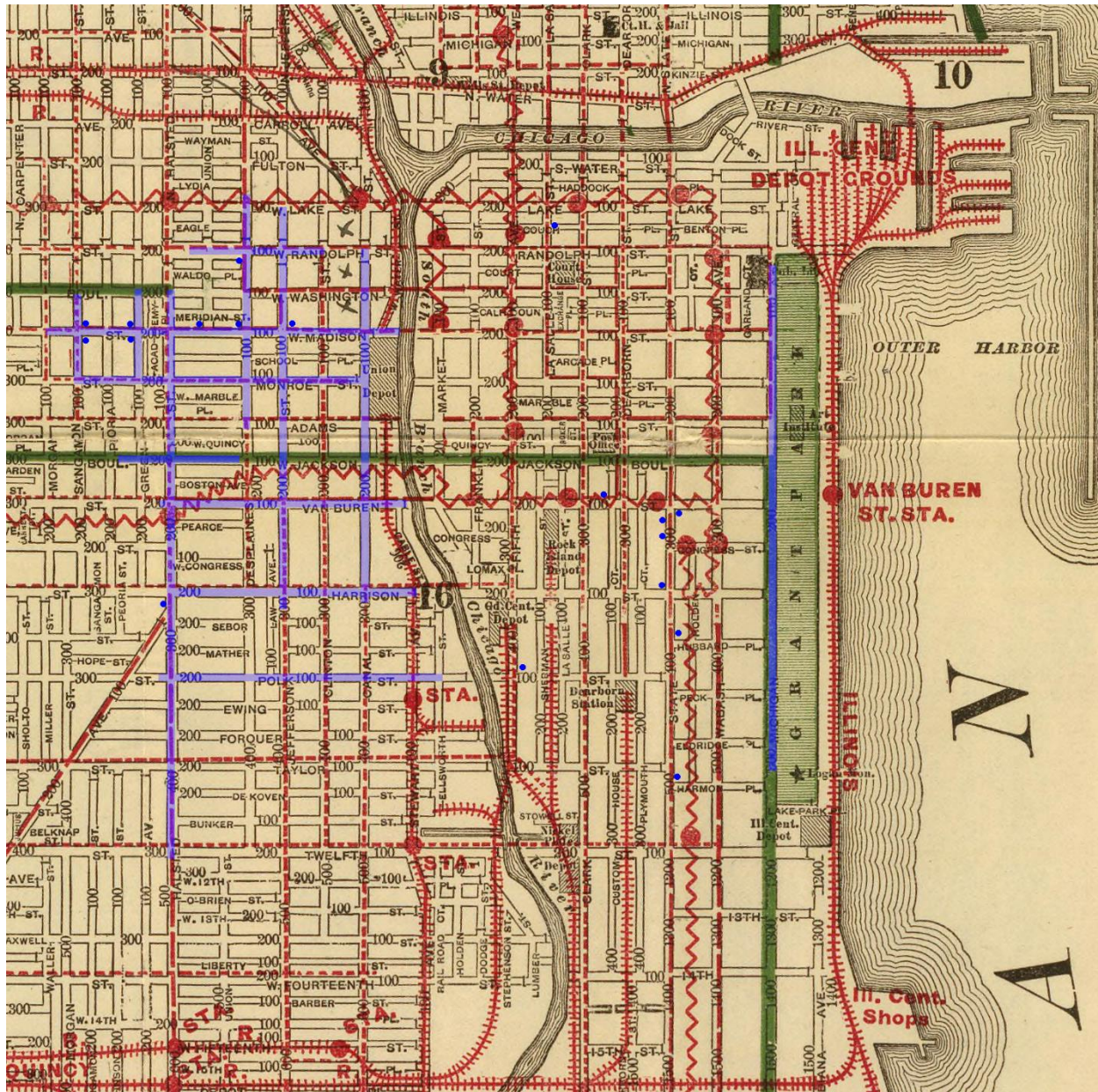


Figure 16. Map: Chicago's Hobohemia and Surroundings: Here, Nels Anderson's observations of where he met and walked with hobos are highlighted (blue lines). Hotels and flophouses, where the addresses are known, are marked (blue dots). The entire map here is three miles across, illustrating how compact Chicago's hobo district actually was. SOURCE: image by author.⁶⁸

⁶⁸ Base map: Rufus Blanchard, *Blanchard's Map of Chicago with the New Street Names* (Chicago: Rufus Blanchard, 1906), *David Rumsey Map Collection*, 2021, <https://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~34147~1170881:Blanchard-s-map-of-Chicago>. Anderson observations from Ernest Watson Burgess Papers, Box 127, Folders 1-5, University of Chicago Special Collections, Chicago, IL.

In the main stem, cheap restaurants were ubiquitous, as was the “coffee and.” Hobos subsisted on these orders of coffee and a roll or doughnut—when one of their own came into some money, it was perhaps the single most begged purchase.⁶⁹ Drinks were usually even cheaper.⁷⁰ Between restaurants, taverns, and saloons, most places took in customers late at night, and maintained regular crews of migrants, catering quite specifically to a crowd that used them as a nighttime shelter as well as a food and drink outlet.⁷¹ Unsurprisingly, employment offices and Christian “missions” (charities offering food and drink in exchange for ears willing to listen to preaching—which hobos disliked as intensely transparent attempts to barter survival for conversion) set up shop immediately next to these businesses.⁷² Gambling houses acted as a social spaces, and—unsurprisingly, given the clientele—the monetary amounts changing hands were pitiful, even nominal or nonexistent. Anderson found more than one where the only games being played were for drinks or cigarettes, or where the games were little more than afterthoughts.⁷³ And though many hobos ended up on the streets, the main stem also was home to flophouses—hotels often containing hundreds of beds in poorly ventilated and cleaned spaces, cheap enough to shelter nearly anyone.⁷⁴

⁶⁹ Nels Anderson, “Document 31,” Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago—Special Collections, Chicago, IL.

⁷⁰ Nels Anderson, “Document 135,” Ernest Watson Burgess Papers, Box 127, Folder 4, University of Chicago—Special Collections, Chicago, IL.

⁷¹ Nels Anderson, “Document 89,” Ernest Watson Burgess Papers, Box 127, Folder 3, University of Chicago—Special Collections, Chicago, IL; Anderson, “Document 135.

⁷² Nels Anderson, “Document 141,” Ernest Watson Burgess Papers, Box 127, Folder 5, University of Chicago—Special Collections, Chicago, IL.

⁷³ Nels Anderson, “Document 79: Report of Visit to Ten Gambling Houses in Hobohemia,” unpublished manuscript, 1923, Ernest Watson Burgess Papers, Box 127, Folder 2, University of Chicago—Special Collections, Chicago, IL.

⁷⁴ Nels Anderson, “Document 151,” Ernest Watson Burgess Papers, Box 127, Folder 5, University of Chicago—Special Collections, Chicago, IL.

For those who had not made stake, begging was a vital art. Unsurprisingly, even a narrator as sympathetic as Anderson relates homeless men who faked ailments or disabilities in order to successfully beg.⁷⁵ For the most part, beggars stuck to familiar terrain: areas where begging was tolerated by police, where families or travelers might be the most sympathetic, where they could find fellow hobos (often the most generous passers-by of all), or near particularly sympathetic establishments.⁷⁶ Their strategies, again unsurprisingly, show significant overlap and continuities with modern homeless populations, especially in evading police brutality and in securing what few possessions they had.⁷⁷ For most people in the city, having no money or too little for a given neighborhood was, effectively, criminalized.⁷⁸ Here, too, it is important to note that the edge between migrant worker and homeless unemployed blurred; in his study, Anderson noted many who had been workers but dropped out of the workforce not for a season but indefinitely—and others who had done the reverse.⁷⁹ To social reformers who assumed begging was a sign of personal dysfunction, the fluidity of this group made little sense.

Other daily necessities might be more subtle—like laundry. In one memorable anecdote, Anderson notes that hobos in Chicago washed their clothing in Lake Michigan. Of course, doing so in plain view of authorities was grounds for arrest on multiple counts—so hobos simply did their washing in an area tucked away behind the Field Museum (today the home of Soldier Field). Housed in a massive new building on a reclaimed piece of land in the

⁷⁵ Document 89, Ernest Watson Burgess Papers, Box 127, Folder 3, University of Chicago—Special Collections, Chicago, IL.

⁷⁶ Harry Beardsley, “Along the Main Stem with Red,” unpublished manuscript, 1917, Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago—Special Collections, Chicago, IL.

⁷⁷ DePastino, *Citizen Hobo*, pp. 247-73.

⁷⁸ Stanley, *From Bondage to Contract*, p. 109.

⁷⁹ Anderson, *On Hoboes and Homelessness*, pp. 61-85.

1910s—and with most of its foot traffic coming from downtown, the Field sheltered hobos on its lakefront from watchful eyes.⁸⁰

But by far the most vital duty of the city was protection from the cold. It is difficult to spend time outside in a Great Plains winter and not come to the conclusion that the place is nigh-on uninhabitable. Arctic air frequently swoops down from the north, unimpeded by lakes, hills, or mountains. The wind is incessant and driving, and frostbite a common occurrence for the unwary or unprotected; temperatures can plunge far below freezing with virtually no warning over the course of a day. Changeability is a feature of most places' weather in the United States, but nowhere is it more a feature of daily life than the Great Plains. For the hobo, the cold was a preoccupation. In poorly constructed work camps, under hedges, or in a leaky boxcar, a winter storm could and did spell death. Some sought refuge in warmer weather, but most railroad lines ran east-to-west. Instead, it was in northern cities like Chicago that most hobos spent their winters.

Cities in the late nineteenth and early twentieth centuries were messy, chaotic places—but it was precisely that kind of built environment that facilitated survival. Literal nooks and crannies, as I show below, were common in cities. Large cities held an abundance of close large structures—further shelter from the wind—and tended to have more abandoned and vacant buildings, or poorly guarded industrial lots. These structures served a dual purpose—they were not only shelter from the wind; they hid hobos from the prying eyes of police and other security.

Comparing fire insurance maps of Chicago and contemporary rural towns is particularly illuminating in this regard. In the city, even in its most built-up areas, negative

⁸⁰ Anderson, *On Hoboes and Homelessness*, pp. 37-8.

space with few lines of sight is common. Nor was this unique to Chicago—most Western cities were built around the same time and along the same lines.⁸¹ But the rural areas sampled by the maps below are quite different. Houses were widely spaced on sprawling property; the gaps between buildings were bigger, affording less shelter from the elements and making would-be occupants more visible to authorities. It is no accident that hobos and tramps stuck to hedges, groves, or railyards in rural spaces, rather than the more common tactic of remaining in or around buildings in cities.⁸² Cities offered a wealth of places to hide from both prying eyes and the elements: they were the perfect space for illegal human beings to survive the cold.

It may seem odd to try to find a reason for this contrast: we expect cities to collect riffraff, and towns to remain pure. But this trope of the bleak, crime-ridden city is heavily classed and racialized, a leftover of Jeffersonian moralizing, and we should not take it as a given.⁸³ The built environment explains hobo seasonality better, as illustrated by Coffeyville, Kansas—a town Nels Anderson noted for having a large, quite typical jungle nearby—and Chicago, Illinois. Coffeyville’s jungle, located to the southwest of the city (near the upper right of the map), doubtless begged from the nearby single family homes on a regular basis (what hobos would have called “tank town”).⁸⁴ But the wide avenues and open lawns would have made for poor shelter from the elements in winter. Even the brick buildings of downtown have few spaces or alleys between them. In contrast, the “main stem” of Chicago contained a

⁸¹ On the common origin and construction of the great Western cities, see Gunther Barth, *Instant Cities: Urbanization and the Rise of San Francisco and Denver* (New York: Oxford University Press, 1975).

⁸² Brown, “Broke,” p. 204.

⁸³ This myth is covered in detail in Hal Barron, *Mixed Harvest: The Second Great Transformation in the Rural North, 1870-1930* (Chapel Hill, North Carolina: University of North Carolina Press, 2000).

⁸⁴ Anderson, *On Hoboes and Homelessness*, p. 42.

stunning array of brick and concrete buildings, with numerous alleys and lots under construction or vacant.

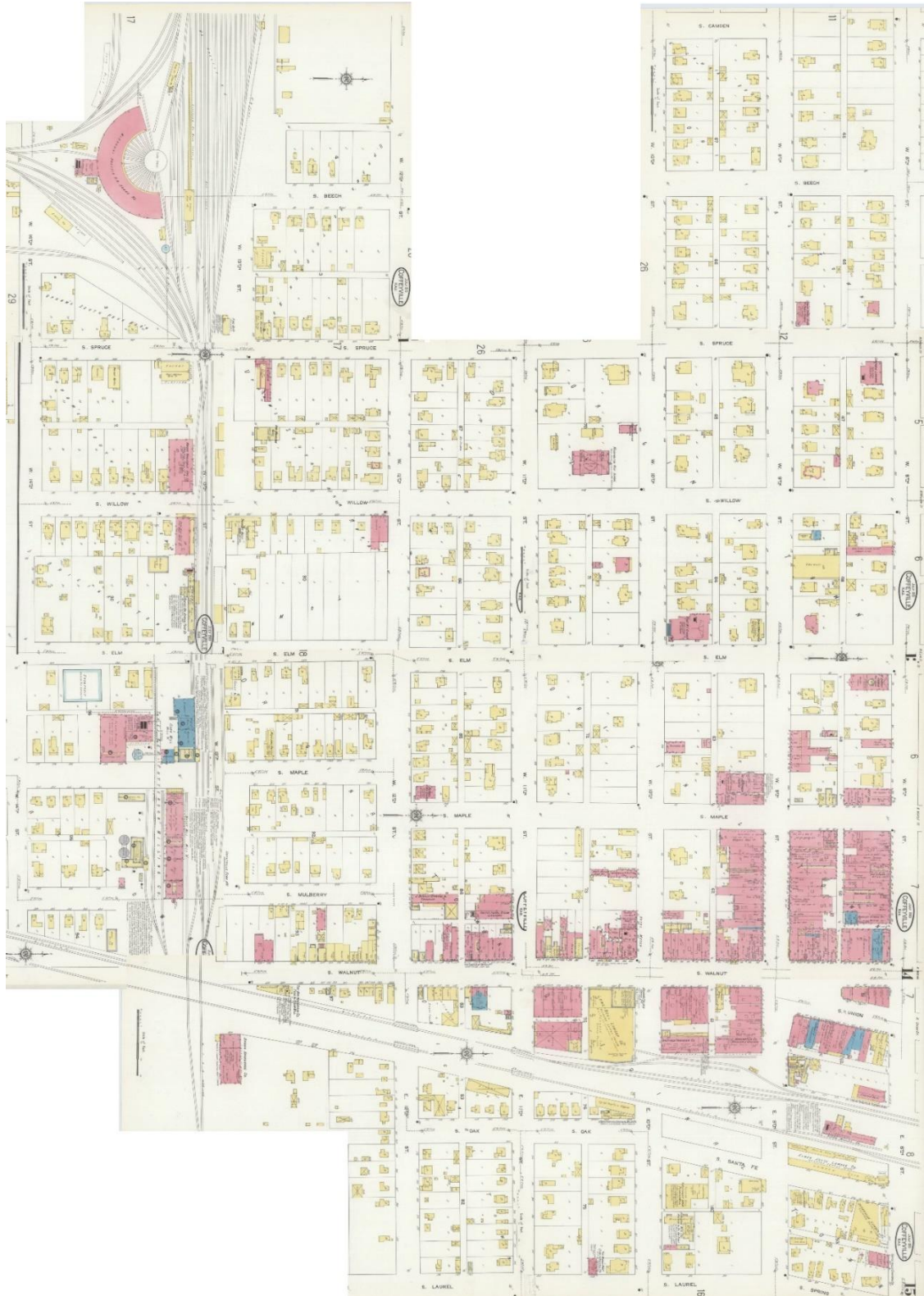
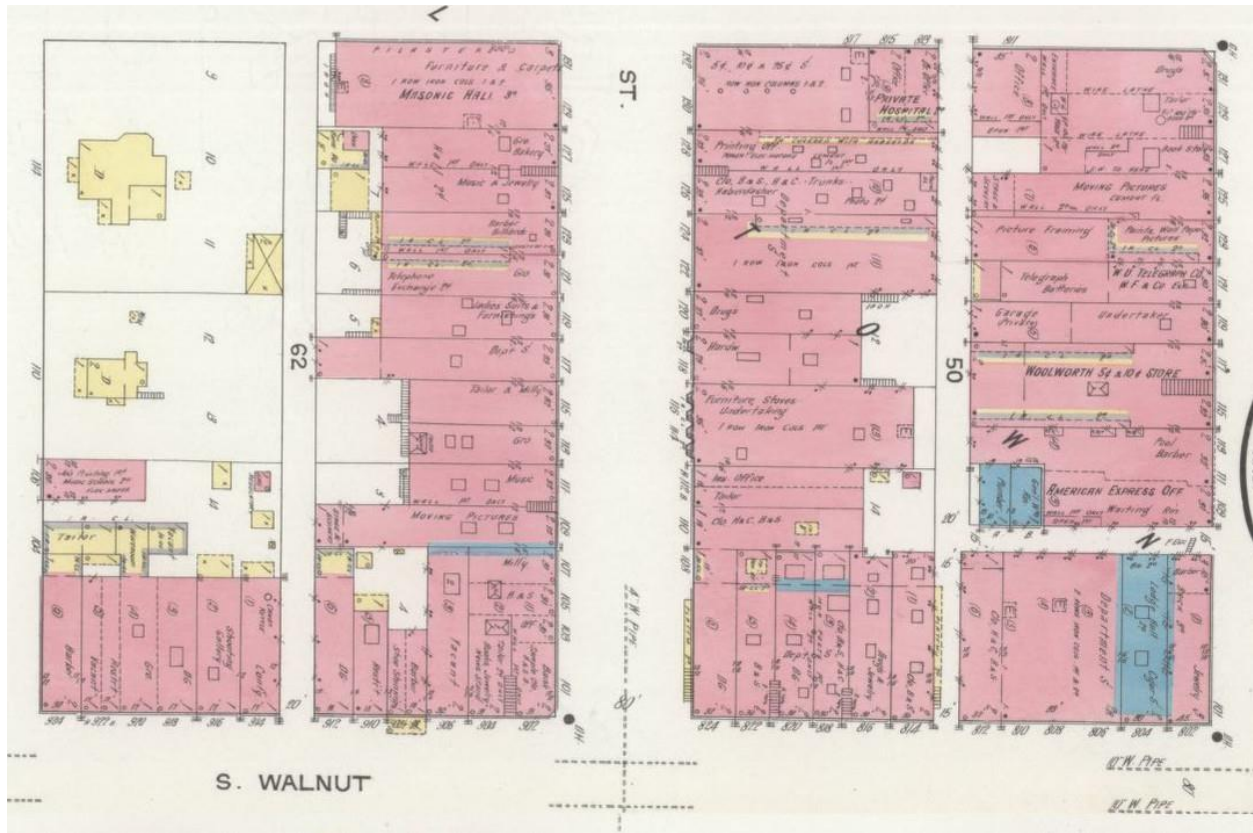


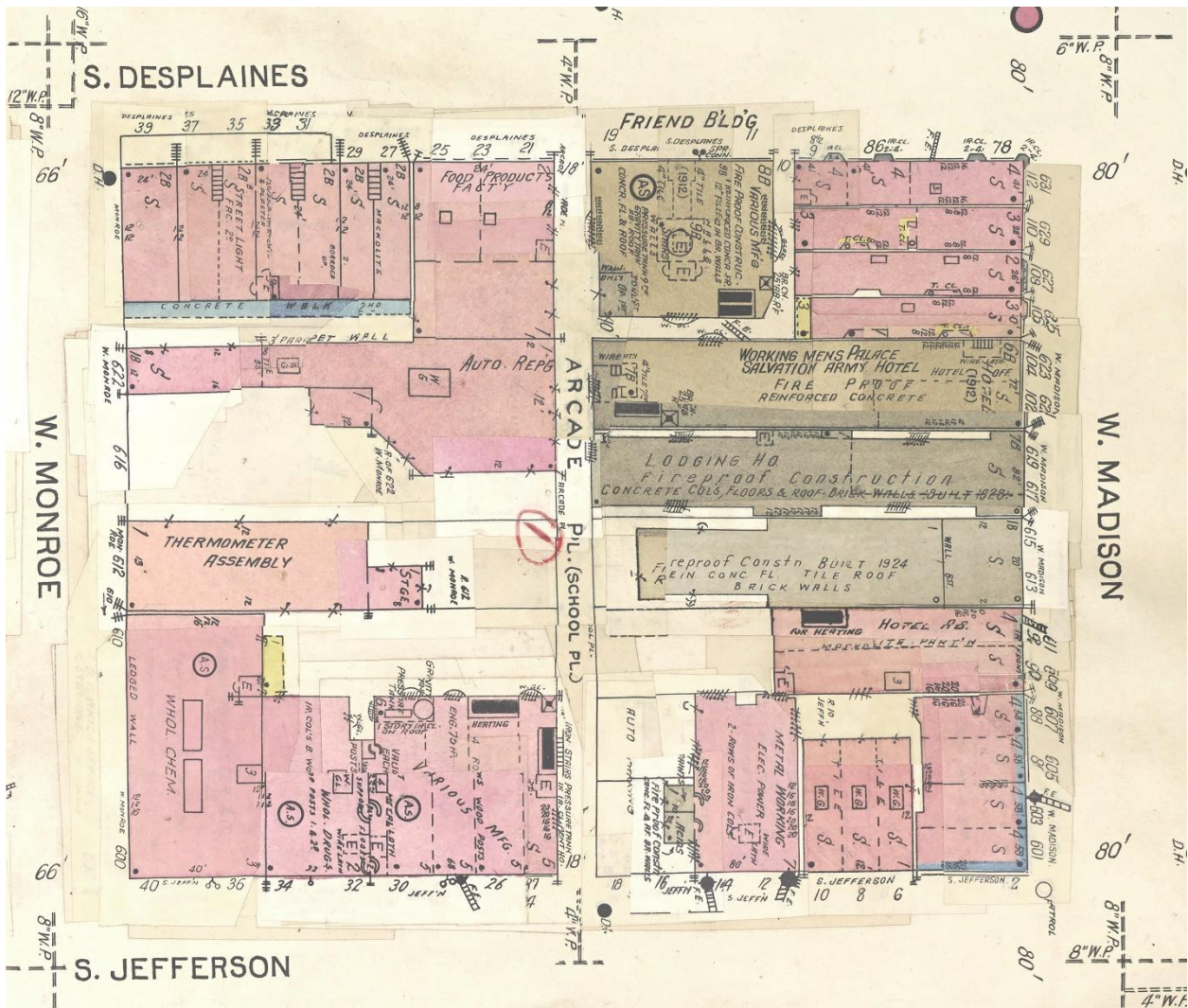
Figure 17. Maps: Fire Insurance Maps of Coffeyville, Kansas. From the railyard to downtown (above) and a zoomed-in image of downtown (below). On these fire insurance maps,

red represents brick, blue stone, and yellow wood-frame buildings. Note the extremely low density and lack of hidden spaces. Even the small downtown was built with businesses facing its alleys, and few restaurants or hotels. North is to the right on both maps (with west facing up); the large hobo jungle Anderson describes is likely to the southwest of the town (that is, to the upper right). SOURCE: Sanborn Map Company, Sanborn Fire Insurance Map from Coffeyville, Montgomery County, Kansas (New York: Sanborn Map Company, 1913), pp. 13-16, 18-23, 27, https://www.loc.gov/resource/g4204cm.g4204cm_g029301913/.⁸⁵



⁸⁵ While Anderson does not describe the location of the jungle precisely, we know from the text above that most jungles are located in woods, near the railyard, near running water—and that the area southwest of Coffeyville’s railyard meets all three criteria, while also being en route to the Central Kansas harvest fields west of the city; see *Google Maps*, accessed 2/28/2021, <https://www.google.com/maps/@37.0305051,-95.6536774,9148m/data=!3m1!1e3>.

and Desplaines (below). These fire insurance maps use the same color key as the Coffeyville maps, with the addition of brown and orange for fireproof construction (usually concrete or steel). Immediately adjacent to the railroad station (the large brown building), the main stem was the heart of hobo life in the city, and continued many more blocks to the west. Note the densely packed brick buildings. SOURCE: Sanborn Map Company, Sanborn Fire Insurance Map from Chicago, Cook County, Illinois (New York: Sanborn Map Company, 1906, 1916-7), vols. 1 (pp. 72-83), 6 (pp. 114-115), and 7 (pp. 16-17), <https://www.loc.gov/resource/g4104cm.g01790195001N>, <https://www.loc.gov/resource/g4104cm.g01790191606>, and <https://www.loc.gov/resource/g4104cm.g01790195007>.



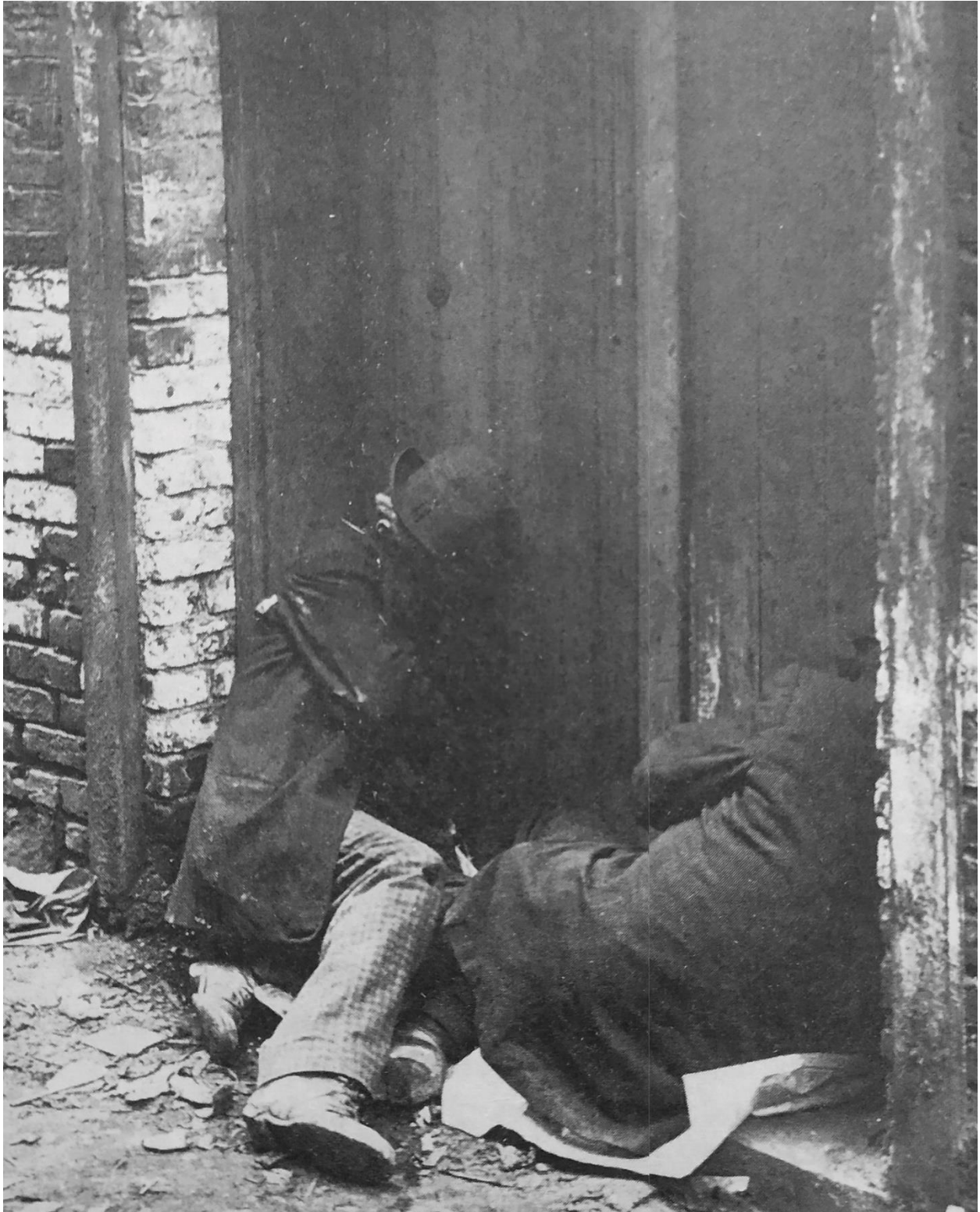


Figure 19. Photograph: Two Hobos Sleeping in a Doorway in Chicago, n.d. Note the additional shelter from the elements provided by an unused doorway. SOURCE: Iain McIntyre, *On the Fly! Hobo Literature and Songs, 1879-1941* (Oakland, California: PM Press, 2018), p. 244.

These images of hobos taking shelter are striking. Taking advantage of the physical construction of buildings, they managed to evade dangerous windchills and cold, and also stay plausibly out of sight of policemen who might otherwise find themselves compelled to intervene—all strategies still employed by the homeless today.⁸⁶ Brick facades with stepped-back construction, common under late nineteenth century zoning law, coupled with doors and atria designed to shelter permanent residents from the cold when waiting to unlock a door, could be life-savers in these unintended uses.⁸⁷ Parks, friendly businesses after hours, and the myriad of vacant houses in a large city were other useful sleeping spaces.⁸⁸ Another key space often found in Chicago, the alleyway, had been intended as an avenue for delivering groceries, coal, and other items.⁸⁹ But their narrow construction—and vitally, the fact that their builders had always intended them to be less trafficked—meant they were less windy and far less policed; ideal for sleeping, eating, sexual encounters, or simply surviving; contemporary reports show them to be a hub of transient life.⁹⁰ Repeatedly, hobos found the line between visibility and invisibility useful: the ability to disappear into a space was synonymous with avoiding a truncheon or a jail sentence.

Even in the most invisible of places, though, the pursuit of mild comfort often brought hobos to the edge of death. Edwin Brown testified to this fact while exploring the city of

⁸⁶ DePastino, *Citizen Hobo*, pp. 247-73.

⁸⁷ Note their prevalence in the Chicago Sanborn fire insurance maps, above.

⁸⁸ Nels Anderson, "Document 7" and "Document 31," Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago—Special Collections, Chicago, IL. p. 3-5.

⁸⁹ Maura Connors, Jonathan Katz, Lee Kuhn, Hannah Loftus, and Jennifer Brandel, "Flammable 'Fire Escapes'? WBEZ Chicago," Accessed 11/3/2020, <https://www.wbez.org/stories/chicagos-flammable-fire-escapes/b53874e6-1c66-42c6-b705-8fd9f2c482c0>.

⁹⁰ Nels Anderson, "Document 31," Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago—Special Collections, Chicago, IL, p. 3. See also *Hull-House Maps and Papers by Residents of Hull-House* (New York: Arno Press, 1970), p. 5.

Pueblo, Colorado. In this small industrial town, he said, “I discovered they were finding men dead in an ash-dump of a railroad company.”⁹¹ As he had done so often before, he spent the night with the homeless itinerant workers, who directed him to the ash dump to get out of the cold. Used cinders from train engines smoldered just gently enough to warm a man at night without burning him—but with a terrible risk. “The great ash-dump, about a fourth of a mile in length, afforded warmth to the destitute homeless man, who had his choice between this exigency and the city jail. Men would lie down on the warm cinders, and while they slumbered, the poisonous gases would asphyxiate them.”⁹² By the time Brown had joined them, the hobos who slept there had learned the dangers posed by carbon monoxide: driven in by the cold, they slept only along the dump’s edges. “I joined the miserable group one night, and as I lay there, and the night grew cold and dark and still, I could see, like serpents, the tongues of blue poisonous fumes leap from crack and cranny.” After a few fearful hours, Brown elected to sleep in the municipal jail instead.⁹³ This was hardly an isolated incident: in other cities, he found men sleeping in brickyard kilns, the round-houses of railroads, and any warm places.⁹⁴ (Brown sarcastically captioned the photograph of the brick ovens below “A Municipal Lodging House”—hoping it made the case for his own proposed municipal lodging houses.)

⁹¹ Brown, *Broke*, p. 57.

⁹² Brown, *Broke*, p. 57.

⁹³ Brown, *Broke*, p. 57.

⁹⁴ Brown, *Broke*, pp. 13-6.



A *Municipal Lodging House. An Average of Seventy Men Slept Each Night in the Denver Brick Ovens during the Cold Weather*

Figure 20. Photograph: Brick Ovens, 1913, where Brown discovered men sleeping in Denver every night. SOURCE: Edwin Brown, "Broke:" The Man Without the Dime, (Boston: The Four Seas Company, 1920 (orig. 1913)), <https://books.google.com/books?id=8qhGAAAIAAJ> p. 16.⁹⁵

More generally, then, these images speak to the ability of itinerant migrants to thrive in the interstices of society, in the *in-between spaces* of an emerging modern world. Arguably, they share this feature with any society's most marginalized groups. Even forces as seemingly totalizing as industrial capitalism or settler colonialism leave gaps. Inefficiencies and mistakes were the places where hobos took root. Everywhere, the hobo faced a difficult choice: to be seen and persecuted, or to become invisible and die. But in the largest of cities, they could occasionally find shelter from both the elements and the police—and survive.

⁹⁵ The sarcasm of the title "Municipal Lodging House" is evident from the fact that the establishment of a municipal lodging house in Denver was the whole point of his social campaign and book.

Radical Lands

When does it matter that a book is not true? For decades, readers who picked up *Sister of the Road: The Autobiography of Boxcar Bertha* found themselves immersed in a startling world. Boxie, nicknamed for her habit of playing and hiding in train boxcars, told of how she plumbed the underbelly of American life, striking off to explore the country without a dime to her name, stealing rides on railroads and food to eat, living in anarchist and free love communes, rejecting marriage as a patriarchal institution and capitalism as exploitative and inhuman. She was by turns heroic, funny, proud, brilliant, and seductive; she showed how hundreds of thousands of Americans imagined—and actually created—a world utterly apart from mainstream society. But while her story was—for the most part—real, Boxcar Bertha never existed.

Boxie was instead, as archivists later discovered, a character invented by Dr. Ben Reitman: an American gynecologist, anarchist, hobo, and Emma Goldman's longtime lover and manager. Reitman based Bertha on at least three women he knew intimately, on the many conversations he had with itinerant women across the country in his own wandering days, and on his own life story.⁹⁶ The stories she had of living in an anarchist commune nestled in the hills, of harrowing escapes from police on the road, of learning gynecology in a pay-what-you-can underground Chicago abortion clinic, of sexual encounters on the road that ranged from semi-consensual to business transactions to free love—all of these were lifted straight from Reitman's life.⁹⁷

⁹⁶ Reitman, *Sister of the Road*.

⁹⁷ More psychoanalytic-minded historians have had a field day with the idea of a gender-flipped semi-autobiographical tale, arguing it is illustrative of the deep shame Reitman suffered from his frequent position

Reitman—and Boxie, for that matter—were unusual transients in a number of ways, but in their politics, they were not. Reitman had escaped the poverty, precarity, and transience of hobo life; though his gynecology work by no means made him wealthy, he was never in danger of homelessness. Boxie performed odd jobs to get by, but she moved fluidly between the different subgroups of transient life, more often than not staying in semi-permanent or permanent communities. As scholars of Reitman’s life—and scholars of life for itinerant women on the road in turn-of-the-century America—write, Boxcar Bertha was highly illustrative of a very real facet of American society.⁹⁸ Through her, Reitman could write of group who used their mobility to flout social norms, spread radical thought, and create their own horizontal democratic political systems that existed in the interstitial spaces of American life. As Boxie put it: “Most of the women on the road... were agitators, it seems to me.”⁹⁹

Perhaps this should not be surprising to us. It is worth noting that democratic self-governance—governance where each individual person had a direct say (often “direct democracy”)—has flourished most on the margins of American life. While American republican institutions were largely designed to obstruct the voice of individuals without wealth or status, indigenous peoples (and the neighboring groups drawing influences from them), pirates, and escaped slave colonies all notably operated through mutual consensus-building, horizontal and non-hierarchical power structures, and mutuality.¹⁰⁰ Hobo

as the bottom in homosexual encounters (at the time, as is frequently the case in history, the top in a homosexual encounter was read as simply fulfilling a biological need for sexual release, the bottom as feminized and debased). For one example in an otherwise quality historical work, see Todd DePastino, *Citizen Hobo: How a Century of Homelessness Shaped America* (Chicago: University of Chicago Press, 2003).

⁹⁸ Barry Pateman, “Afterword,” in Reitman, *Sister of the Road*, pp. 201-4.

⁹⁹ Reitman, *Sister of the Road*, p. 13.

¹⁰⁰ David Graeber, “There Never Was a West: Or, Democracy Emerges From the Spaces In Between,” in *Possibilities: Essays on Hierarchy, Rebellion, and Desire* (Oakland, California: AK Press, 2007), *The Anarchist*

encampments and life on the road more generally fit this broader trend perfectly—here, on the extreme edge of American society, with limited abilities to coerce or police, politics operated necessarily by consent of the governed.

As consequence, hobo-dom and its adjacent itinerant communities contained some of the most radical thinkers in the United States. Most hobos traveled for work, and no small number of those who didn't instead traveled for family reasons.¹⁰¹ But many overtly rejected a normal life for political reasons—perhaps because they hated capitalist society, or perhaps because their identity could only be expressed on the road. For other hobos, constant exploitation in the workplace, mistreatment by police, and the working-class immiseration that migrant work only magnified tended to radicalize them even further. Marxism, socialism, anarchism, syndicalism—all of these ideologies were par for the course.

Hobo political culture reserved its strongest revulsion for capitalism. Hobos saw themselves (and the broader working class) as *producers*—and the capitalist class as entirely parasites. Thus ran a typical editorial in the *Hobo News* (a radical newspaper produced by and—nominally—for hobos):

[P]eople in the United States are starving, half naked and without homes, and we are told that it is because the world has not produced enough food, clothing and shelter to go 'round... we have 'produced' and 'produced' and 'produced,' but want and nakedness and lack of homes has not decreased, and we can keep on producing until doomsday and the same conditions will continue...¹⁰²

Library, 4/23/2016, <https://theanarchistlibrary.org/library/david-graeber-there-never-was-a-west>. see also Marcus Rediker, *Between the Devil and the Deep Blue Sea: Merchant Seamen, Pirates and the Anglo-American Maritime World, 1700–1750* (New York: Cambridge University Press, 1987); Bruce Johansen, *Forgotten Founders: Benjamin Franklin, the Iroquois Indians and the Rationale for the American Revolution* (Ipswich, Massachusetts: Gambit, Inc., 1982).

¹⁰¹ Anderson, *On Hoboes and Homelessness*, p. 82.

¹⁰² H.A.W., “Speed Up, Produce,” *Hobo News*, Chicago, Vol. 9, no. 7? 7?/1921. [microfilm]

Dozens of other examples abound in the wider hobo literature, with most self-described orators, thinkers, or poets penning anti-capitalist or “producerist” texts. A.W. Dragstedt—a friend of Anderson’s who we have met before, certainly framed the social ills of his time that way: “That problem, the Economic Problem, the Labor Problem, the Social Problem... was clearly stated by Lincoln, back in 1858, when he said: ‘...It is the eternal struggle between Right and Wrong. It is the Spirit that says, ‘You toil and work and earn bread and I’ll eat it.’”¹⁰³ Not for nothing was the most popular organization among hobos the IWW, a union explicitly devoted to the task of “organiz[ing] as a class, tak[ing] possession of the earth and the machinery of production, and abolish[ing] the wage system.”¹⁰⁴

In contrast to the parasitic capitalist class (and their lackeys), transient writers maintained, it was workers who were the *real* engine of society—and these people were brutally oppressed: “It is only the men and women who have suffered misery, sorrow and pain who really are life’s valuable asset.”¹⁰⁵ Capitalist oppression and exploitation, moreover, was designed purely to pad the profit margins; it gave only the barest of handouts to workers who earned their keep many times over. Anti-work credos went hand-in-hand with anti-capitalist prose, as one speaker colorfully illustrated at the “Hobo College” (an adult education program in Chicago): “Why should a man work more than three days a week? If he does that much, he’s doing the work of himself and two non-producers. Thomas Edison has got figures to show that if every man worked and done his share, we’d only have to work

¹⁰³ Nels Anderson, “Document 24,” Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago—Special Collections, Chicago, IL.

¹⁰⁴ This appeared in virtually every document published by the IWW; for example: Abner Woodruff, *Evolution of American Agriculture* (Chicago: Agricultural Workers Industrial Union No. 400 of the IWW, 1919), p. 5.

¹⁰⁵ Nels Anderson, “Document 23,” Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago—Special Collections, Chicago, IL.

one day a week. Look at all the lazy capitalists and the mil—" (According to the author, the hobos present shushed him at this point to eat their lunch.)¹⁰⁶

Again, the number of hobos who wrote about their condition are only a tiny sliver of the larger migrant class. But it is striking how frequently hobos are quoted by journalists, adventure writers, and in oral histories espousing similar rhetoric, from the older hobo who acted as Barbara Starke's guide in the 1930s—"Unskilled labour is out! They're just muscle, they can't think. They stand in front of machines, and think they're running the machines because they make a few motions now and then and keep a watch. But the machine runs them."—to "Slim's" instructions to Edge on how to wield a shovel as a weapon if the strikebreakers attacked them—"[it's] a hell of a dangerous instrument if properly handled. It should be used like a bayonet, not like a flail. This is a general principle of fighting. The short, quick thrust, straight ahead, is more effective, and provides better defense, than a mighty swing, which leaves you unguarded."¹⁰⁷ Soapboxers in Chicago distributed pamphlets distilling "difficult academic language to the understanding of the man on the street;" and exhorted the poor to organize as the rich had done: "He does not want the poor man at the bottom to organize, because he fears that he will not be able to keep them at the bottom."¹⁰⁸ Hobos seem to have read widely and voraciously, devouring scientific and political literature along with music criticism and class works of fiction—and outright refusing to read spiritual works.¹⁰⁹

¹⁰⁶ Harry Beardsley, "Along the Main Stem with Red," unpublished, 1917, p. 16, Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago—Special Collections, Chicago, IL.

¹⁰⁷ Starke, *Touch and Go*, p. 262; Edge, *The Main Stem*, p. 50.

¹⁰⁸ Nels Anderson, "Document 60," Ernest Watson Burgess Papers, Box 127, Folder 2, University of Chicago—Special Collections, Chicago, IL.

¹⁰⁹ Nels Anderson, "Document 150," Ernest Watson Burgess Papers, Box 127, Folder 5, University of Chicago—Special Collections, Chicago, IL; also Edge, *The Main Stem*, p. 87.

Another look at hobo politics surfaces in Nels Anderson's oral histories in an unexpected venue: a debate over whether courts provided adequate protection for labor, between students the Hobo College adult education program and his own PhD alma mater, the University of Chicago. Unsurprisingly, they employed very different styles, with hobo speakers having cadences reminiscent of soapbox speeches, "able to hold the attention of the crowd better... humorous and terrible by turns," and the university boys "well prepared, [presenting] a well organized debate. They had good team work, and presented their arguments in the usual conventional manner. Their speeches were rather prosy and laden with statistics. Somehow they could not get the ear of the audience." The verdict of the crowd, a gathering of hobos who frequented the College, was a decisive two-to-one vote in favor of the former.

The hobos who occupied the rear of the hall were very pronounced in their antipathy to the formal arguments of the college boys... They plainly showed their disapproval of arguments based on the assumption that the workers could get justice in a court. The argument of the negative was that the workers were in the hands of the enemy when they went to court, and that the judges were 'the kept ladies of the monied interests.'¹¹⁰

But perhaps the clearest and most widespread evidence of anti-capitalism came in song. Hobo songs routinely spoke of mistreatment and exploitation, contrasting their situation with those who employed them—and those who ran the system. These songs (and these sentiments) emerged virtually simultaneously with tramps, as one 1870s example demonstrates: "They tell me to work for a living,/And not through the country to stamp;/And yet, when I ask for employment,/They say I am only a tramp."¹¹¹ Another referenced the

¹¹⁰ Nels Anderson, "Document 138," Ernest Watson Burgess Papers, Box 127, Folder 5, University of Chicago—Special Collections, Chicago, IL.

¹¹¹ [Author Unknown], "Only a Tramp," 1870s?, in McIntyre, *On the Fly!*, p. 19.

common and vivid hobo experience of riding in a train's undercarriage, fictionalizing a railroad baron's daughter advocating, "If ride they must, let 'em ride the rod,/Let 'em put their trust in the hands of God."¹¹² Songs didn't only express radical ideas; they worked to subvert censorship and repression of radicalism. Radical unions like the IWW got around vagrancy laws that criminalized heterodoxy by joining in with Salvation Army songs and belting altered lyrics critiquing capitalism (here sung over "Revive Us Again"): "Oh, why don't you save all the money you earn?/If I didn't eat, I'd have money to burn./Whenever I get all the money I earn,/The boss will be broke and to work he must turn."¹¹³

The perseverance of the capitalist system preoccupied these writers, as did the various structures that maintained its power. Often, hobos blamed their sedentary working class counterparts for falling prey to capitalist propaganda, like the argument of one soapboxer "that the Bible and the Church were the most powerful instruments in the hands of rich men for keeping the poor man down."¹¹⁴ But they recognized a whole host of others were required to maintain the system. William Edge noted at one radical union meeting a poster showing a pyramid: "a crowd of miserable, agonized workers supporting a huge platform on their backs. The platform had five or six superimposed stages on it... On each stage was a group of the non-productive workers of society... Beside the soldiers were the words, 'We shoot at you.' Beside the clergy were the words, 'We fool you,' and so on."¹¹⁵ Elsewhere, Edge's companion "Slim" dismissed non-transient workers as "scissorbills," that is: "a worker who loves his wife, his boss, and the capitalist system at large."¹¹⁶

¹¹² [Author Unknown], "Hobo John," 1880s?, in McIntyre, *On the Fly!*, p. 29.

¹¹³ [Author Unknown], "Hallelujah, Bum Again," date unknown, in McIntyre, *On the Fly!*, pp. 135-6.

¹¹⁴ Nels Anderson, "Document 60," Ernest Watson Burgess Papers, Box 127, Folder 2, University of Chicago—Special Collections, Chicago, IL.

¹¹⁵ Edge, *The Main Stem*, p. 22.

¹¹⁶ Edge, *The Main Stem*, pp. 6-7.

Beyond anti-capitalism, hobo life was something of a haven for all sorts of countercultural movements. Of these, contemporaries could not help but fear and be fascinated by homosexuality and sexual “deviance.” The usually sympathetic Nels Anderson noted a “prevalence of sex perversions, as masturbation and homosexuality” in his survey—in calling them “perversions,” he aimed for a relatively clinical meaning.¹¹⁷ These inclinations, he thought (as was fairly typical of the time—and still is today), reflected a basic male need for “sex expression in order to be healthy,” a belief which he wrote motivated hobos’ pursuit of male companionship.¹¹⁸ He recorded many instances of hobos telling him of their homosexual encounters on the road, overheard several conversations between lovers in the city of Chicago, and experienced many advances himself.¹¹⁹ Hobos viewed homosexual experiences variously as sexual release, expressions of free love, “coming of age” experiences, and as places for gay men to express themselves far from more stringently policed social spaces.¹²⁰ All in all, the practice was normal, widespread, and mostly accepted among the tramping community.¹²¹ For heterosexual hobos, accepting or gently refusing sexual advances was a part of life—for others, it was one of the primary draws of the road.¹²² This overall live-and-let-live outcome, along with the myriad practices and ideas expressed by hobos, contributed to broader social stigma around the tramp and hobo for masculinity

¹¹⁷ Anderson, *On Hoboes and Homelessness*, p. 70.

¹¹⁸ Anderson, *On Hoboes and Homelessness*, p. 111.

¹¹⁹ Nels Anderson, “Document 125, Ernest Watson Burgess Papers, Box 127, Folder 4, University of Chicago—Special Collections, Chicago, IL.

¹²⁰ Depastino, *Citizen Hobo*, pp. 85-91. For a look at contemporary homosexuality more broadly, see Chad Heap, *Slumming: Sexual and Racial Encounters in American Nightlife, 1885-1940* (Chicago: University of Chicago Press, 2008); George Chauncey, *Gay New York: Gender, Urban Culture, and the Makings of the Gay Male World, 1890-1940* (New York: Basic Books, 1994). Reitman and others show that hobo and hobo-adjacent subcultures certainly provided much room for the idea and expression of “free love” (Reitman even uses these exact words).

¹²¹ Anderson, *On Hoboes and Homelessness*, p. 70.

¹²² Anderson, *On Hoboes and Homelessness*, p. 70; Anderson, “Document 32,” Ernest Watson Burgess Papers, Box 127, Folder 1, “Document 87,” Box 127, Folder 3; “Document 110,” Box 127, Folder 3; “Document 120,” Box 127, Folder 4, “Document 122,” Box 127, Folder 4, University of Chicago—Special Collections, Chicago, IL.

and the home—they were seen to directly contradict the centrality of home and family in late nineteenth century American life.¹²³ It is no stretch to connect these politics with the broader criminalization and demonization of migrant workers.¹²⁴ Indeed, the penal system repeatedly inflicted horrendous trauma on migrant workers charged with “deviance,” ranging from forced circumcision to castration, with lifelong effects that left victims “unstable” and “sub-normal” for years afterwards.¹²⁵ Such violence served to further separate hobos from the sedentary communities they passed through—a separation which I argue only spurred their embrace of radical politics.

However, though the hobo population consistently pursued radical politics, they were also overwhelmingly young, male, and white—with corresponding limits on their radicalism.¹²⁶ Their tolerance for black coworkers in camps and job sites, though significantly greater than most places in contemporary America, varied significantly from group to group.¹²⁷ Similarly, even though hobos subverted the gender norms and hardening sexual binary of the time (cooking and cleaning for themselves, by and large tolerating homosexuality), the homosocial nature of hobo culture meant the campsites were saturated with working-class performances of masculinity: crass humor, vulgar language, physical displays of machismo, and so on.¹²⁸ Populated mostly by single young men, older divorcees and widowers, these were hardly neutral spaces.¹²⁹ Indeed, the jungle was an explicitly

¹²³ For this larger trend, see again, Stanley, *From Bondage to Contract*.

¹²⁴ Indeed, Canady argues exactly this; Canady, *The Straight State*, pp. 91-134.

¹²⁵ Carl Pazram, in McIntyre, *On the Fly!* pp. 125-6; Nels Anderson, “Document 5,” Ernest Watson Burgess Papers, Box 127, Folder 1, University of Chicago—Special Collections, Chicago, IL.

¹²⁶ Anderson, *Hoboes and Homelessness*, p. 82.

¹²⁷ Anderson, *Hoboes and Homelessness*, p. 44.

¹²⁸ Depastino, *Citizen Hobo*, pp. 83-5.

¹²⁹ Nels Anderson, “Document 125,” Ernest Watson Burgess Papers, Box 127, Folder 5, University of Chicago—Special Collections, Chicago, IL.

exclusionary space, deliberately circumscribed by community-building—a community that by and large centered on this young white male cohort.

Yet the road was not devoid of women. Three percent of the migrants directed by the Kansas state free employment bureau during harvest time were women in an average year; women likewise cooked and cleaned for larger crews working construction or logging.¹³⁰ The enormous task of cooking alone guaranteed large labor demands for women, and though hobos cooked and cleaned for themselves in jungle campsites, the fare at most jobs outside of urban construction work seems to have been provided for them, or purchased on site.¹³¹ This accords with the number of women Nels Anderson observed on the road.¹³² Yet it is still surprising, particularly in light of the fact that, even within the gendered work of cooking and cleaning, employers hired nearly as many men to do it on an industrial scale.¹³³ Moreover, we know women went on the road for many of the same reasons as men (to escape family situations, heartbreak, etc.)—and that some disguised themselves, quite successfully, to get work in the same jobs as men.¹³⁴ Why were there so few women hobos?

The obvious answer is that those categorizing people as “hobos” simply drew the lines of their group in such a way that excluded women. Induction into hoboemia usually happened through short-term, relatively anonymous homosocial relationships. Jungles frequently had ad hoc organization to them, but even more frequently consisted of only a few men by the side of the road. Though hobos had codes of etiquette that mandated sharing

¹³⁰ Anderson, *The American Hobo* pp. 49-53.

¹³¹ Interviews with Norman Daniel, Fred Kiener, Charles Miller, and Andrew Hanson, USCIR unpublished notes.

¹³² Anderson, *Hoboes and Homelessness*, p. 82.

¹³³ “Labor Agent Stanley Shows What May Be Accomplished in Labor Distribution,” *Bismarck Daily Tribune* (Bismarck, ND), 10/8/1916, <https://chroniclingamerica.loc.gov/lccn/sn85042242/1916-10-08/ed-1/seq-10/>.

¹³⁴ Depastino, *Citizen Hobo*, p. 83.

material resources, they relied on inclusion in the larger class of migrants—inclusion that had to be inferred or assessed. When women entered into spaces like jungles or worksites, they often drew considerable scrutiny.¹³⁵ Even setting aside the threat of sexual violence—frequent for men and omnipresent for women—hobos policed the arbitrary boundaries of their class through relationships with each other. Thus, while women moved to work and could be habitually migratory as men did, they clearly circulated through different transportation networks and temporary accommodations—though absent further work on this topic it is difficult to speculate exactly how.

What is clear is that these transient women lived hobo-adjacent lives, often overlapping and intersecting with the lives of hobos in fascinating ways. Ben Reitman's heroine, and the real women she was based on, hint at these connections. While Boxcar Bertha rarely moved through the classic jungles, she frequently stayed in semi-permanent or permanent camps and boarding houses with other women, families both blended and nuclear, and other mixed-gender groups.¹³⁶ As Bertha's own story indicates—that of a child born into one of these camps, later choosing to take up the migrant life—such families seem to have occupied a liminal space between hobos and longer-term intentional communities.¹³⁷ All women of the road being “agitators,” Reitman thought there was a close connection between this lifestyle and his politics.

Young women who did make a hobo life work found various ways to leverage their gender, using their presumed innocence to help male hobos avoid suspicion from police. “I thought people stupid to call me courageous,” asserted a young Barbara Starke of her late

¹³⁵ Starke, *Touch and Go*, pp. 90-1.

¹³⁶ Reitman, *Sister of the Road*, p. 43, among other examples.

¹³⁷ Reitman, *Sister of the Road*, pp. 7-14.

1920s travels: “Very few men had actually laid hands on me... none had forced the issue to physical struggle. Probably my husky voice and boyish clothes, my lack of either fear or coquetry, were all to my advantage. No, my opinion of men was steadily rising... I was not courageous; I still feared women and critical people; but men were my playfellows.”¹³⁸ Starke made a point of pretending to be an older man’s daughter in exchange for continuing adventures and enjoying each others’ conversation.¹³⁹ Other women saw traveling alone as useful, particularly later in the period for bumming rides from automobile drivers, or “frankly considered her body as her working capital.”¹⁴⁰ But just like their male counterparts, women asked about their tramping mostly cited a desire to escape—“my fear of the ordered and relentless world I should have been held in had I not run away,” as Starke put it.¹⁴¹

The rise of the automobile changed numerous things about hobo life, eventually playing a significant role in spelling its doom. Here, however, it is worth noting one of its major effects was to homogenize movement among transients. Where before non-hobo migrant women appear to circulated differently—perhaps more frequently taking trains legally and staying with families or other women where possible—the rise of the automobile and the relative decline of the steam train ensured that hobos, like these other migrants and transients, began to take the same forms of transportation everywhere. At the precise moment that the hobo subculture began to decline (following the declining need for practical skills in catching trains, and thus the long traditions of mentorship and homosocial

¹³⁸ Starke, *Touch and Go*, p. 185.

¹³⁹ Starke, *Touch and Go*, p. 261.

¹⁴⁰ Reitman, *Sister of the Road*, p. 13; quote from p. 29.

¹⁴¹ Starke, *Touch and Go*, p. 47.

relationships), it also became harder to distinguish from other groups of transient and down-on-their-luck Americans.¹⁴²

Ultimately, hobos believed that their way of life was unique—that it lent itself to radical thinking, and that radicals who rejected mainstream American thought would gravitate towards their patterns as well. The idea that material conditions could radicalize or de-radicalize a worker seemed entirely logical; as Bill Quirke wrote for the *Hobo News*, his time as a hobo had made apparent to him that “a man's manner of living and work environment determine to a large extent his viewpoint...” Hobos shared a certain sensibility, while “A floater who lives and works for a few months amongst the town workers seems unconsciously to drift from his mental kinship with the Hobo Workers and acquire, more or less, the mental viewpoint of those workers with whom he is thrown into association.”¹⁴³ Certainly, exploitation and misery cultivated a widespread sense that hobos did not earn their fair share of what industrial society produced. This kind of material link is easy to establish—but we can go further, still. It was not exploitation that made hobos radical. It was nothing less than the way they related to the world around them.

*** **

Conclusion

Between the homosocial world of tramping, the anarchic and politically charged world of jungles, and the radicalizing world of the city, the physical conditions of a hobo's life actively spread radical ideologies. Ecology circulated hobos in and out of the American West. Incredible variability in climate and weather made life and work highly unpredictable. This

¹⁴² Depastino, *Citizen Hobo*, pp. 171-94.

¹⁴³ Bill Quirke, "Amongst the Home Guards," *Hobo News*, Chicago, IL, Vol. 9, No. 7? July, 1921 p. 5.

pushed them to take highly dangerous travel routes, stay long stretches in ad hoc camps without any work, and overwinter in Eastern cities. These precise conditions constantly buffeted hobos with new ideas, bringing them into contact with new people, exposing them to worlds of misery and imagined worlds of redistributive plenty.

It is unfashionable for scholars to draw connections between material and cultural worlds—the evidence for either is wildly different, and it is hard to avoid implying people are merely mechanistic products of a deterministic universe on the one hand, or that we have total mastery over our world on the other. And certainly, there is little to suggest that the ecology of the American West directly prompted radical thinkers, who owed more to intellectuals in far distant places. But the material world of hobo life acted as an accelerant for radical thought, spreading it to far more working class individuals than might otherwise have been possible. These same working class individuals, even while sifting through the cracks of the system, lived at the heart of major cities, tramped through the countryside, and generally permeated American life. The unprecedented circulation of people outside the elite or the military of the late nineteenth century coincides with a massive uptick in the popular cachet of egalitarian thought.

In fossil-fueled industrialization, Marx and others saw the seeds of liberation. For organized labor in America, at the very least, that liberation proved inaccessible, with capital harnessing the enormous capacity for state violence and brutally suppressing most efforts of workers towards carving out a better life.¹⁴⁴ Hobos, as I have shown elsewhere in this

¹⁴⁴ Richard White, *The Republic for Which It Stands: The United States During Reconstruction and the Gilded Age, 1865-1896* (New York: Oxford University Press, 2017), Thomas Andrews, *Killing for Coal: America's Deadliest Labor War* (Cambridge, Massachusetts: Harvard University Press, 2008), William Forbath, *Law and the Shaping of the American Labor Movement* (New York: Cambridge University Press, 1991), David Montgomery, *The Fall of the House of Labor: The Workplace, the State, and American Labor Activism, 1865-1925* (New York: Cambridge University Press, 1989).

dissertation, were by no means an exception to this general trend. Nor were hobo camps some sort of utopia. Yet hobohemia (and its more rural cousins) provided places of refuge for some of the most heterodox ideas in American life. More than that—it actively took them in, breathed life into them, and gave them places where they were seriously considered on the merits. It was the physical, material dynamism of this space, I argue, that allowed for ideological dynamism—this constant back-and-forth of hobo life that exposed hobos to new people and ideas.

Hobos, for the most part, remained on the fringes of American life, with only a few finding a wider audience in American thought (like Jack London or Ben Reitman). Hobohemia is significant mostly as a refuge and incubator, as a place where what we frequently see as intellectual, abstract concepts interacted with and gained wide currency among individuals who would never have described themselves as intellectuals. For historians and scholars of radical thought or of the environment, I argue it should also stand out as a startling example of how material conditions and the more-than-human world of climate, technology, and plants and animals can influence our intellectual ambit.

In the next chapter, we will see how the remarkable world hobos built came crashing down in the late 1920s and 1930s. The same world that had given rise to a massive army of transient workers fell apart as the face of agriculture, forestry, and mining fundamentally changed—a transition that would have massive ramifications for wider American life. This, too, had its basis in the most fundamental physical building blocks of working life: a transition from coal to oil that utterly transformed American migrant work, race relations, and rural life, forever.

Chapter Four

The Second Western Work Regime: Oil, Mexicans, and Nitrates, 1920-1940

Sometime in the late 1920s, Barbara Starke ran away from home. “I had cut all the ties that had bound me; clothes would not matter nor possessions hamper. I would start from the bottom up and erect my own scale of values.”¹ Rejecting the idea of doing little more than “boresome work, and then buy[ing] pink hats,” she struck off West.² Like so many other hobo narratives, hers reported run ins with the law, witnessing some of the purest evils that the country had to offer, and sleeping on the bare ground and in boxcars while eating very little; she offered her political commentary freely. One element of Starke’s story, however, is so quotidian that it likely escapes the notice of the modern reader: hitchhiking. A relatively new kind of travel in the 1920s, automobiles carried Starke clear across the country.³ It was one of the men she bummed a ride from, Dick, who became her guide to the labor struggles of the hobo.⁴ Perhaps the simple fact that a transient girl could now get rides from friendly passers-by instead of always stealing her way onto a train or walking seems like a trivial detail. However, the phenomenon of hitchhiking was part of what was nothing less than a revolution in transient life.

Between about 1920 and 1940, a massive and multifaceted transition took place across rural American workplaces. Oil and internal combustion engines eliminated horses

¹ Barbara Starke, *Touch and Go: The Story of a Girl's Escape* (London: Jonathan Cape, 1931), p. 37.

² Starke, *Touch and Go*, p. 40.

³ Starke, *Touch and Go*, pp. 137-8.

⁴ Starke, *Touch and Go*, p. 261.

and shunted manual labor to the periphery. Where the early fossil fuel revolution had been limited in scope by the bulkiness of steam engines and coal, oil pushed fossil fuels into extractive industries like agriculture, forestry, and mining across the West in the early twentieth century. Simultaneously, a slow but ceaseless turnover in the manual labor force gradually pushed hobo workers out, as farmers and other bosses opted for Mexican-American laborers instead. In this chapter, I argue that these twin trends—energy and labor—emerged as part of a single, interconnected transition, one that I term the rise of the second Western work regime. The rise of the internal combustion engine mechanized specific work—in this chapter, I focus on the wheat harvest—that had been contracted on a daily or weekly basis. Oil allowed employers to solve the unpredictable climate with fossil fuels; it and the parallel exploitation of aquifers (fossil water) and nitrate fertilizers (fossil biomass) allowed farmers to exploit entirely new soils. In other words, Western agriculture shifted to far more intensive forms, “tall” (involving many external inputs) rather than “wide.” The extractive work that remained in the West, like sugar beet and fruit agriculture, was still seasonal, but far more consistent, enabling employers to contract labor well ahead of time and over the long-term. The risks of climate, in other words, had been substantially reduced; the need for workers embroiled in climate precarity mostly eliminated. The result was that they could turn to cheaper, but harder to arrange, transnational migrant labor—specifically, that of the Mexican-American immigrant.

This argument runs against the standard interpretation of why hobos began to disappear from the labor force. The employment of tractor-powered harvesters in the Great Plains and Mexican workers in fruit and sugar fields have each traditionally been cast as

labor-busting tactics responding directly to post-World War One labor mobilization.⁵ Fears of unionization on the part of white hobos threatened growers in both regions, this reasoning runs, leading them to lean on a more easily leveraged transnational migrant workforce.⁶ However, foreign workers often proved to be adept organizers and fierce strikers.⁷ Moreover, the mechanization of wheat and other agriculture had little to do with the timing of particularly effective labor actions. The I.W.W. had been feared and reviled, cast as saboteurs and strikers from early in the 1900s, and increasingly intricate mechanical devices to save labor in the harvest had been touted since the settlement of the Plains. Labor-saving devices certainly reduced the nation's reliance on farm hands, but they had not substantially reduced the number of harvest hands needed in the Plains. It was the elimination of muscle power, of the labor-heavy horse-powered harvester, that had the most to do with the transformation of the wheat fields.

Connecting the story of immigration to energy history also explains why the Mexican-American labor force rose to prominence when it did. Transnational migration for agricultural work has been noted since the beginning of the twentieth century, particularly in California.⁸ However, this workforce increased substantially in number across the 1910s, 1920s, and 1930s. This increase has been variously attributed to cost-saving measures in agriculture, changes in immigration law from both the United States (where agribusiness hoped for cheaper workers) and Mexico (where the government hoped expatriates might

⁵ For the former, see Byron Lew and Bruce Cater, "Farm mechanization on an otherwise 'featureless' plain: tractors on the Northern Great Plains and immigration policy of the 1920s," *Cliometrica* 12 (2018).

⁶ Greg Hall, *Harvest Wobblers: The Industrial Workers of the World and Agricultural Laborers in the American West, 1905-1930* (Corvallis, Oregon: Oregon State University Press, 2001).

⁷ Lori A. Flores, *Grounds for Dreaming: Mexican Americans, Mexican Immigrants, and the California Farmworker Movement* (New Haven: Yale University Press, 2016).

⁸ Carey McWilliams, *Factories in the Field: The Story of Migratory Farm Labor in California* (Boston: Little, Brown, and Company, 1944).

gain valuable work experience with modern methods and technology), the increasing quality of transport connections between Mexico and the United States, and the specificity of the workforce in individual crop industries.⁹ However, it is striking that despite decades of solid railroad links, Mexican-American communities rarely ranged beyond the Texas-California borderlands before the First World War.¹⁰ Connecting them to the broader ecological and economic changes of the 1920s better explains the timing of these shifts. Mexican migrant workers only became useful outside of the specific context of borderlands agriculture when employers could plan far enough ahead to hire a transnational workforce months ahead of time—namely, when fossil fuels reshaped agriculture with irrigation and fertilizers, eliminating climate risk. A new constituency, one who planted new year-round labor-

⁹ Many scholars have explored this topic. Mae Ngai, *Impossible Subjects: Illegal Aliens and the Making of Modern America* (Princeton, New Jersey: Princeton University Press, 2004) shows that immigration law mostly shuffled immigration from documented to undocumented. Francisco Balderrama and Raymond Rodriguez, *Decade of Betrayal: Mexican Repatriation in the 1930s* (Albuquerque: University of New Mexico Press, 1995) explore how communities that Mexican immigrants constructed north of the border were uprooted with little sympathy from either Mexican or American governments. Deborah Cohen, *Braceros: Migrant Citizens and Transnational Subjects in the Postwar United States and Mexico* (Chapel Hill, North Carolina: University of North Carolina Press, 2011) argues both governments saw this as an opportunity for modernizing Mexico. Flores, *Grounds for Dreaming* demonstrates that agriculture and its highly repressive labor environments shaped the racialization of migrant labor. Kelly Lytle Hernández, *Migra! A History of the U.S. Border Patrol* (Berkeley, California: University of California Press, 2010) demonstrates that the border patrol represented a massive expansion of state violence into everyday life. S. Deborah Kang, *The INS on the Line: Making Immigration Law on the U.S.-Mexico Border, 1917-1954* (New York: Oxford University Press, 2017) shows that the INS effectively wrote its own enforcement procedures. Jim Norris, *North for the Harvest: Mexican Workers, Growers, and the Sugar Beet Industry* (St. Paul: Minnesota Historical Society Press, 2009) studies how the rise of the sugar beet industry became the first home of Mexican immigrant labor in the Midwest. Emily Prifogle, “Legal Landscapes, Migrant Labor, and Rural Social Safety Nets: A World of Neighbors and Strangers in Michigan before *State v Shack*, 1942-1965,” unpublished article shared with the author, 2020 argues that humanitarian efforts helped alleviate some of the worst of labor conditions in migrant camps. Dennis Nodín Valdés, *Al Norte: Agricultural Workers in the Great Lakes Region, 1917-1970* (Austin: University of Texas Press, 1991) argues that agricultural employers used the 1920s as an “ethnic laboratory” to find the most controllable workforce. Cindy Hahamovitch, *The Fruits of Their Labor: Atlantic Coast Farmworkers and the Making of Migrant Poverty, 1870-1945* (Chapel Hill, North Carolina: University of North Carolina Press, 2010) shows continuities in migrant work across the industrial era. David Vaught, *Cultivating California: Growers, Specialty Crops, and Labor, 1875-1920* (Johns Hopkins University Press, 1999) argues that, from the average grower’s perspective, labor relations were personal rather than industrial.

¹⁰ Manuel Gamio, *Mexican Immigration to the United States: A Study of Human Migration and Adjustment* (New York: Dover Publications, 1971 (orig. 1930)), p. 160 for effects of railroad construction in the Porfiriato (1876-1910), long before the rise of immigration given elsewhere in the book (pp. 1-12).

intensive crops, employed increasing numbers of Mexican-Americans and lobbied for immigration policies that allowed their continued growth.

Furthermore, this work revises how we understand the environmental history of energy and agriculture, both in the United States and globally. Environmental historians have often connected labor systems to the built and unbuilt environments they occupy.¹¹ This work, however, largely assumes static environments, without much consideration of how human and nonhuman feedback loops and emergent complexity can reshape labor in surprising ways. The same ecologies can house radically different labor forms, depending on the populations and political systems that inhabit them. At the same time, agricultural studies of energy transitions have of course noted the massive changes in output that resulted from fossil fueled industrialization.¹² Here, however, I explore the dramatic effects of changing energy systems on manual laborers, rather than for the landholding classes. In so doing, I draw connections between the lived experience, interpretation, and management of energy systems in everyday life, and dramatic structural shifts in the energy economy.¹³ As I do elsewhere in this dissertation, I argue that the ultimate arrangement of labor, energy, and ecology is an emergent property of the various human and non-human agendas that collide in these spaces. The case of the Great Plains in the 1920s and 1930s is illuminating

¹¹ Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1985); Thomas Andrews, *Killing for Coal: America's Deadliest Labor War* (Cambridge, Massachusetts: Harvard University Press, 2008).

¹² Deborah Fitzgerald, *Every Farm a Factory: The Industrial Ideal in American Agriculture* (New Haven: Yale University Press, 2003); Geoff Cunfer, Andrew Watson, and Joshua MacFayden, "Energy Profiles of an Agricultural Frontier: The American Great Plains, 1860-2000," *Regional Environmental Change* 18, no. 4 (April 2018); Hal S. Barron, *Mixed Harvest: The Second Great Transformation in the Rural North, 1870-1930* (Chapel Hill, North Carolina: University of North Carolina Press, 1997); McWilliams, *Factories in the Fields*.

¹³ Further exploration of the social effects of energy can be found in David Nye, *Consuming Power: A Social History of American Energies* (Cambridge, Massachusetts: Massachusetts Institute of Technology Press, 1997).

because, in it, we witness the breakdown of one of these arrangements and the gradual establishment of a new one in its place.

This chapter is organized around four different facets of the work transition of the 1920s-1940s. First, I explore the contours and impact of a broad shift in transportation from rail to road. Second, I show how the concentration of power in internal combustion engines allowed for the increasing mechanization of agriculture. Third, I show how the fossil revolution extended not only to fuels, but also to the way settler capitalists watered and fertilized crops. Lastly, I explore the way that these trends came together with a new set of debates on immigration and labor practices to make a new work regime, one which centered oil, Mexicans, and nitrates. On occasion, I draw on evidence from outside of the Great Plains to illustrate that they were merely part of—and therefore influenced by—larger transformations going on in agriculture and rural work across the country. However, the Great Plains remained unique. Its climate continued to circumscribe the choices farmers could make about agricultural labor. Uncertainty still reigned. Moreover, it continued to be the heart of the hobo work regime right up to the point of its demise.

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Cars and Trucks

In so many ways, trains defined the hobo experience. Bumming rides, riding the rods or the brakebeam, evading the railroad police, taking the road not quite knowing where it might go—these standard hobo tropes lay in the truth that railroads transported the vast majority of the hundreds of thousands of hobos who lived at the beginning of the twentieth century. Departure points and hiring all happened by the railyard; jungles grew up by tracks.

The geography of the railroad was synonymous with the geography of hobos. What, then, happened when the railroad began to decline and the automobile took its place?

From about 1900 to 1930, Americans made their roads safer for automobiles and less safe for pedestrians; they discarded horses, and bought cars. Trains declined in use, and coal trains especially gave way to petroleum-powered cousins (not yet diesel) or trucks. Americans reimagined the countryside and the city alike, rebuilding it around an entirely different way of life. This transformation was a gradual, uneven process, bitterly contested in the political and cultural arenas of the time. But in the end, the car and truck triumphed so utterly that alternatives are virtually unimaginable now.¹⁴ This transformation of the transportation sector was perhaps the single greatest blow to the hobo way of life, and by the 1940s, it was all but over.

Rural areas initially offered especially stiff opposition to the intrusion of the car. Extremely frightening to livestock, associated with urban joyriding excursions, and wildly impractical, early automobiles had little to offer farmers. These attitudes shifted in the 1900s and 1910s for several interrelated reasons. Improvements in power and traction, coupled with farmers finding new and inventive uses for the automobile, including providing farm power, certainly played roles.¹⁵ An unheralded but equally significant factor was the success of a long-lived, decentralized political movement simply called the “Good Roads Movement,” one which took advantage of new technologies to pave long and level stretches of roads and eliminate the muddy, dangerous travel that had been the norm for car users before the

¹⁴ Christopher Wells, *Car Country: An Environmental History* (Seattle: University of Washington Press, 2013).

¹⁵ Ronald Kline and Trevor Pinch, “Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States,” *Technology and Culture* 37, no. 4 (October 1996).

1910s.¹⁶ By the First World War, many rural areas of the country had “improved road” connections, allowing for increased speeds and comfort—such roads were roughly comparable in density to the main “trunk lines” of the railroads.¹⁷ With increasingly cheap mass produced cars in the 1900s, the number of petroleum powered automobiles grew from 5,000 in 1900 to over 450,000 in 1910, and over 8,000,000 in 1920.¹⁸ When accounting for the fuel consumed by each kind of transport on the road as in the map below, the result was an energy transition of astonishing magnitude.

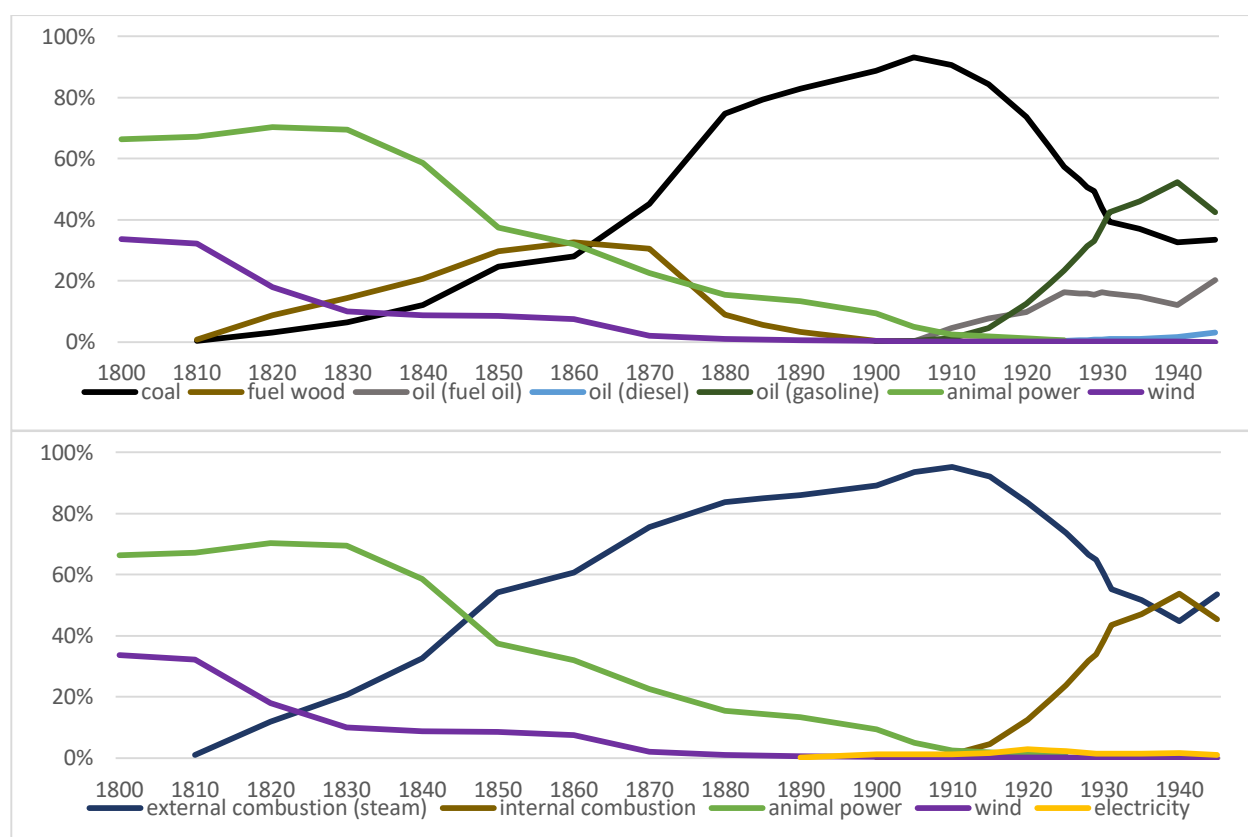


Figure 21. Chart: Energy Used in Transportation, 1800-1945. Fuels (top) and Engine Type (bottom). In the top chart, we can see the rise of fuel oil (in trains) and gasoline (in cars); the former did not constitute trains switching from steam power (external combustion), but simply

¹⁶ Wells, *Car Country*, pp. 5-34.

¹⁷ Clason Map Company, “Clason’s Guide Map of the United States,” Denver: Clason Map Co., 1919, <https://www.loc.gov/resource/g3701p.ct001838/>.

¹⁸ Susan B. Carter, Scott Sigmund Gartner, Michael R. Haines, Alan L. Olmstead, Richard Sutch, Gavin Wright, *Historical Statistics of the United States: Millennial Online Edition* (Cambridge University Press, 2020), <https://hsus.cambridge.org/HSUSWeb/HSUSEntryServlet>.

*a change in what was used in the boiler. In the bottom, we can see the rapid rise of internal combustion engines, mostly in trucks and automobiles (with only a small percentage of trains switching to diesel before World War Two). SOURCE: image by author.*¹⁹

Good roads and good cars profoundly altered the geography of rural space. In the railroad era, rural Americans in the North organized by rural neighborhoods, clustered around a few pieces of essential infrastructure—the one-room schoolhouse, the local church, and the crossroads general store being the most well-known. By facilitating longer-distance trips, automobiles reoriented development around nearby towns, consolidating school districts, congregations, and commercial districts, and eliminating all but individual farming families from the rural periphery.²⁰ The automobile also offered convenience and freedom to women, children, and marginalized groups like indigenous Americans living on reservations.²¹

The rise of the automobile severely depressed train use in turn, but initially, it appears to have had only a light impact on hobo travel. Hobos primarily took freight trains, not passenger lines—these trains were less guarded, spent much more time idling in yards where one could stow away, and boxcars simply had more space for a stow-away. Automobiles cut primarily into passenger traffic; passenger miles traveled declined sharply after 1920, with a decline of almost half before the Great Depression.²² But as the chart below indicates, freight traffic plateaued between the 1920s and the Great Depression, at which

¹⁹ Data from Robert Suits, Nathan Matteson, and Elisabeth Moyer, “Energy Transitions in U.S. History, 1800-2019,” *RDCEP Working Paper Series* (2020). Data for these figures are taken mostly from reports by the US Census, USGS, USDA, US Bureau of Mines, US Commissioner of Railroads, National Agricultural Statistical Service, and the Cambridge *Historical Statistics of the United States*. Note that all figures here indicate primary energy rather than final energy—that is, *inputs* (e.g. the amount of coal burned) rather than *outputs* (e.g. the amount of horsepower actually produced by the coal in a steam engine). They therefore correspond more closely to infrastructures of extraction than engine efficiencies.

²⁰ Wells, *Car Country*, pp. 125-172.

²¹ Philip Deloria, *Indians in Unexpected Places* (Lawrence, Kansas: University Press of Kansas, 2004), pp. 136-192.

²² Carter, et al., *Cambridge Historical Statistics of the United States*.

point it plummeted. The sudden mass stoppage of freight shipments completely hamstrung the normal circulation of hobo laborers. One, Tom Kromer, described trains overflowing with transients in 1930, “half loaded, [holding] more men in the reefers and on the tops and under the rods than there were pounds of freight in the cars.”²³ By the time train travel resumed normal levels in the 1940s, the game had fundamentally changed. First, while ton-mileage increased, it was mostly larger trains carrying fewer cars longer distances, and slower. Second, after World War Two, trains began to convert to diesel, a process that was largely complete by the early 1950s.²⁴ Where steam trains had stopped for water and fuel frequently, affording hobos many chances to board and escape, diesel trains ran essentially without interruption except for unpredictable diversions onto sidings (tracks that fronted the main road, their diversions to let faster passenger or mail trains by) or in the yards.²⁵ Hobos in the 1920s and 1930s did not comment on these changes directly—they were gradual, piece by piece, and for obvious reasons, hobos during the Depression had much more immediate concerns than fuel systems. But for men who traveled by means that were already haphazard and hard to navigate—it was hard to pick out a random freight train and know where it might be going or pausing—the decrease in frequency of trains and stops surely had an impact. Certainly, it caused more and more migrants to turn to hitchhiking—as we shall now see.

²³ Tom Kromer, *Waiting for Nothing*, 1935, in Ian McIntyre, *On the Fly! Hobo Literature and Songs, 1879-1941* (Oakland, California: PM Press, 2018), p. 393.

²⁴ Carter, et al., *Historical Statistics of the United States*.

²⁵ Jeff Schramm, *Out of Steam: Dieselization and American Railroads, 1920-1960* (Bethlehem, Pennsylvania: Lehigh University Press, 2010).

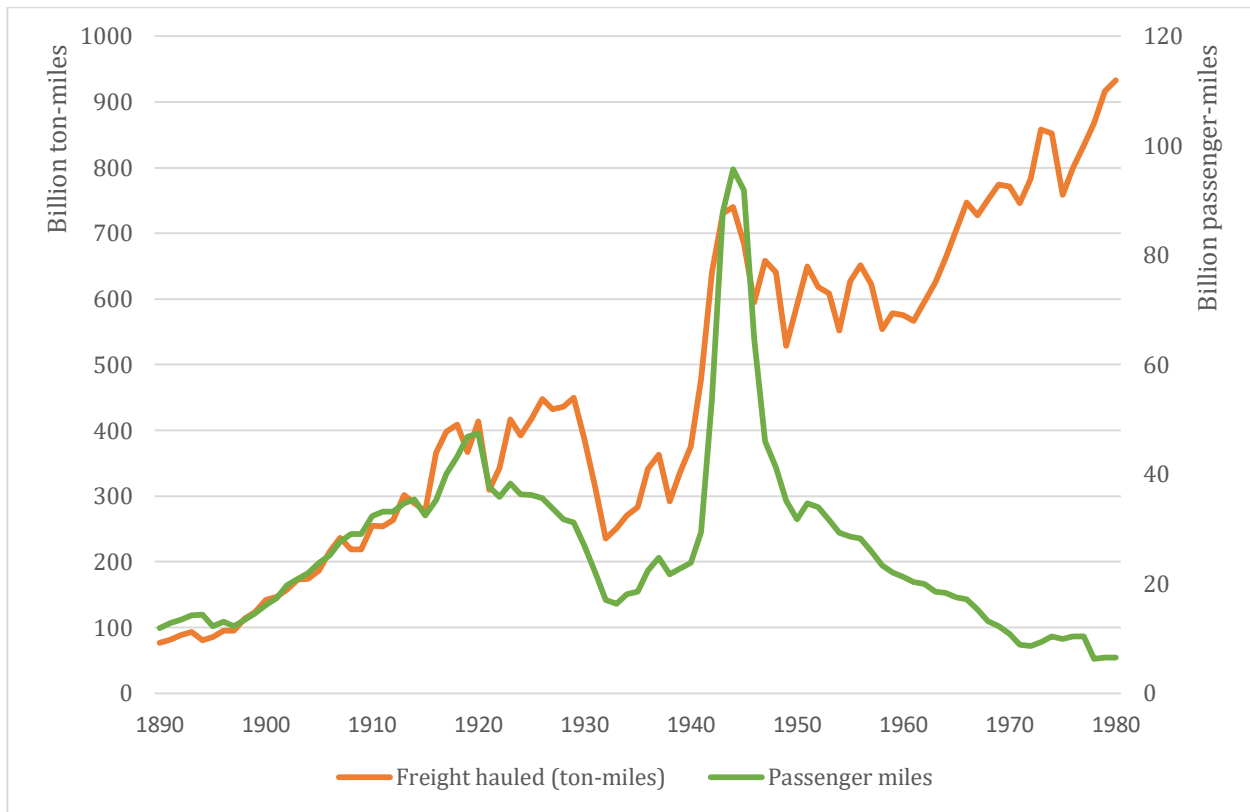


Figure 22. Chart: Passengers and Freight Hauled, United States, 1890-1980. Hobos, as we have already noted, usually took freight trains (orange) rather than passenger cars (green). The amount of freight, measured in ton-miles (i.e. the carriage of one ton one mile in distance) dropped precipitously during the Great Depression. When freight travel rebounded during the Second World War, distances traveled increased substantially, with much longer-haul, slower trains, ill-suited to carrying hobos from place to place for work. After World War Two, trains also became overwhelmingly reliant on diesel, equally ill-suited to bumming rides, as explained in the text above. SOURCE: image by author.²⁶

While trains remained central to hobo narratives, the importance of hitchhiking rose dramatically across the 1920s and 1930s. The first place where this really became apparent was in the wheat harvests, where reports as early as the 1910s suggested harvest hands had begun to make the trip by automobile.²⁷ While government reports note that most still made the trip by train to Kansas even in the mid-1920s, the trend of harvest hands traveling by car

²⁶ Data from Carter, et al., *Historical Statistics of the United States*.

²⁷ "Harvest Hands in Autos: No More Riding 'Blind Baggage' or 'Hitting Back Doors,'" *The Topeka State Journal* (Topeka, KS), 7/18/1913, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1913-07-18/ed-1/seq-12/>; "Harvest Hands Reach State in Own Autos," *The Madison Daily Leader* (Madison, SD), 7/6/1922, <https://chroniclingamerica.loc.gov/lccn/sn99062034/1922-07-06/ed-1/seq-3/>.

increased rapidly over the course of the decade—at least, before the harvest hand as a workforce began to vanish.²⁸ The “change in type of transportation,” the near-contemporary scholar Carey McWilliams claims, “was probably the decisive factor in eliminating the single transient worker... By 1926 it was estimated that 65 per cent of the harvest hands were traveling by automobile.”²⁹

Across other industries, from an overwhelmingly rail-based society, a federal study in 1936 recorded that 70% of “unattached” men traveled illicitly by train, with most of the remaining 30% hitchhiking. “Family groups,” they reported, owned their own vehicles about half the time, with 30% hitch-hiking.³⁰ It is worth being skeptical of this study—and generous in our interpretation. Barbara Starke’s account, written in the early 1930s, recounts traveling widely by car with an older hobo, and she and Dick found it exceedingly useful to pose as daughter and father to allay police or driver suspicion.³¹ Hitchhiking, after all, came with its own set of unspoken rules, customs, and hazards. As one black transient, Eluard Luchel McDaniel, recorded of a trip in 1931: “At that time hitch-hiking was not so good. People were afraid to trust strangers in their automobiles. The people that would give anyone a ride, did not want their car dirtyed up by Bums like us.”³² Despite these dangers, as the statistics above indicate, hitchhiking became an increasingly attractive option—one

²⁸ Don Lescohier, *Sources of Supply and Conditions of Employment of Harvest Labor in the Wheat Belt*, USDA Bulletin 1211 (Washington, D.C.: Government Printing Office, 1924), and Thomas Isern, *Bull Threshers and Bindlestiffs: Harvesting and Threshing on the North American Plains*, (Lawrence, Kansas: University Press of Kansas, 1990), p. 160.

²⁹ Carey McWilliams, *Ill Fares the Land* (Boston: Little, Brown, & Co., 1942), p. 100.

³⁰ John N. Webb, *The Transient Unemployed: A Description and Analysis of the Transient Relief Population* (Washington, D.C.: Works Progress Administration Research Monograph, Issue 3, 1935), <https://books.google.com/books?id=OgK3MbuZCyAC>.

³¹ Starke, *Touch and Go*, p. 262.

³² Eluard Luchel McDaniel, “Bumming in California,” in McIntyre, *On the Fly!* p. 407.

where a hobo could more closely control where they went. No wonder, as one investigation noted, were hobos siting their jungles not just near train tracks, but along roadways as well.³³

More than simply a blow against hobo transportation, though, the rise of internal combustion struck against the very nature of work in early twentieth century rural America. Porters and teamsters made up a significant fraction of the hobo labor force—around a tenth of hobos drove horse teams as late as 1920, a number that is, if anything, an underestimate.³⁴ Even if we could assume a seamless transition for hobos between driving horses and driving trucks, the speed and power of trucks significantly reduced labor requirements between the two systems. Nor was this an isolated impact—virtually every industry in the country employed horses for moving goods around. At the very same time that hobos found it harder and harder to get to work, an equally profound shift was taking place in the decentralization of mechanical power—a shift to which we now turn.

*** **

Tractorization

“Exit horse. Enter truck and tractor. There you have, in six words, a definition of the Power Revolution that is now taking place in the cities and on the farms of the United States.”³⁵ So the authors of *Horse, Truck and Tractor* opened their 1913 promotional book, extolling the virtues of recently-invented petroleum-powered vehicles for farm and city work alike. They were not wrong—just a little premature. From 1900 to the Second World

³³ Thomas Minehan, “Their Tribal Life,” in McIntyre, *On the Fly!* p. 468.

³⁴ Nels Anderson, *On Hoboes and Homelessness*, Raffaele Rauty, ed. (Chicago: University of Chicago Press, 1998), p. 85-6. This is likely an underestimate, as most hobos did not profess a single trade in the survey—even if they clearly worked it from time to time.

³⁵ Herbert Casson, Rollin Hutchinson, and L. W. Ellis, *Horse, Truck and Tractor: The Coming of Cheaper Power for City and Farm* (Chicago: F. G. Browne & Co., 1913), <https://books.google.com/books?id=ju0DAQAIAAAJ>, p. 1.

War, the United States went from a land more reliant on horses than ever before to one filled with tractors, with enormous consequences for both those who owned and those who worked the farms. By the 1930s, wheat farming operations went from employing vast teams of itinerant workers at the harvest and renting massive steam-powered threshers to petroleum-consuming enterprises, mostly self-sufficient in labor. Enabled by a sweeping energy transition rooted in the miniaturization of power, the replacement of itinerant workers across the American West with internal combustion engines happened across industries. But it is best exemplified by the trajectory of agriculture.

Farm-owners had long dreamed of labor-saving devices in the wheat belt. Self-raking reapers, automatically-knotting binders—various gadgets aimed to reduce the farmers of Kansas and the Dakotas’ reliance on the vast annual influx of harvest hands. None had been successful. Although some boosted productivity, the gains were marginal, and teams of horses and intricate machinery always required human supervision.³⁶ They had achieved *mechanization*—transferring various tasks from hand labor to machine labor—and they had even turned the farm into something rather resembling a rural factory, but they had come nowhere close to *automation*. The problem of power was simply intractable: horses, even those bred for power and endurance in the late nineteenth century, could not pull the enormous so-called “combine harvesters” that aimed to bundle every harvesting and threshing task into one.³⁷ As *Horse, Truck, and Tractor* claimed: “Both human muscle and horse muscle are too weak for the heavy labors of today.”³⁸

³⁶ Isern, *Bull Threshers and Bindlestiffs*, pp. 37-9.

³⁷ William White, "Economic History of Tractors in the United States," *EH.net Encyclopedia*, edited by Robert Whaples, 3/26/2008, <http://eh.net/encyclopedia/economic-history-of-tractors-in-the-united-states/>.

³⁸ Casson, Hutchinson, and Ellis, *Horse, Truck, and Tractor*, p. 6.

Steam engines—the other main source of power in the era—were even worse. Massive and bulky, they had little use in agriculture, as “The farm power plant must be capable of going from place to place and doing its work wherever found.”³⁹ A few farmers tried to hitch their plows to the ubiquitous steam thresher engines, with predictable results: “Weak, awkwardly coupled, and saving no labor, such ventures were doomed to failure. Even the gang plows which served so well with animals were unwieldy and entirely too frail when used behind engines; for engines have no instinct to warn them to halt for stumps and tones.”⁴⁰ Even when used for their designed purpose of threshing wheat, these steam engines still carried “several serious disadvantages,” including “bulky fuels, of which it could carry only a limited supply, and which required considerable time and labor in conveyance. It consumed a large amount of water, which in a dry country was frequently a serious handicap. It was heavy and cumbersome and required a man of considerable ability to operate it properly.” Even ignoring that and their large crews, they took half an hour or more of burning fuel to build up sufficient steam pressure to work.⁴¹ A steam engine big enough to actually save costs on labor needed to have a wide plow just to cover the area behind the vehicle, and such a device was notoriously unmaneuverable—a killer for a plow, which had to turn 180 degrees at the end of every furrow.⁴² Moreover, as with every steam engine, the possibility loomed large of a lethal explosion.⁴³

The gas internal combustion engine changed everything. Relatively compact, with a fuel that didn’t need to be handled, but just siphoned directly from the fuel tank into the

³⁹ Casson, Hutchinson, and Ellis, *Horse, Truck, and Tractor*, p. 123.

⁴⁰ Casson, Hutchinson, and Ellis, *Horse, Truck, and Tractor*, p. 136.

⁴¹ Arnold Yerkes and H. H. Mowry, “Farm Experience with the Tractor,” USDA Bulletin no. 174 (April 15, 1915), accessed 3/15/2021, <https://books.google.com/books?id=h8pFAQAAIAAJ>, p. 3.

⁴² Casson, Hutchinson, and Ellis, *Horse, Truck, and Tractor*, pp. 137, 160.

⁴³ White, “Economic History of Tractors in the United States.”

engine, it rapidly surpassed prior attempts at steam tractors. The authors of *Horse, Truck, and Tractor* asserted confidently that “a recent Government report shows [that] a farm horse averages 3 ½ hours of work a day.” Using these figures, along with some cost and power comparisons, they concluded that a horse “tires out in six hours; so that we may fairly assume a tractor to be as powerful as 25 horses, as enduring as 100 horses, and about as expensive as ten.”⁴⁴ The petroleum-fueled tractor was not without its problems, but it far outclassed its competitors.⁴⁵

The key lay in the miniaturization of power. As the scholar Vaclav Smil notes, petroleum engines offered an absurd increase in the concentration of power per unit of weight: while a horse or a person required about 1000 grams per Watt and the best railroad steam engines of 1900 only 60 grams per Watt, the latter, with its enormous weight of fuel and machinery, could never operate on a road.⁴⁶ The soft soil a tractor had to drive over provided an even greater challenge. In comparison, by the turn of the century, the internal combustion engines of a Mercedes automobile had cut that to 9 grams per Watt.⁴⁷ Moreover, the use of oil instead of coal—with a much higher density of energy—meant that far more energy could be produced for a given weight of fuel. While, contrary to some scholars’ interpretations, this energy density mattered little to the economy as a whole, in transportation, in which heavier fuels meant a vehicle burned a lot of energy just carrying its own fuel, it was central.⁴⁸ The overall effect was that an internal combustion engine could be

⁴⁴ Casson, Hutchinson, and Ellis, *Horse, Truck, and Tractor*, p. 3.

⁴⁵ Alan Olmstead and Paul Rhode, “Reshaping the Landscape: The Impact and Diffusion of the Tractor in American Agriculture, 1910-1960,” *The Journal of Economic History* 61, no. 3 (September 2001).

⁴⁶ Vaclav Smil, *Energy and Civilization: A History* (Cambridge, Massachusetts: Massachusetts Institute of Technology Press, 2017), p. 244.

⁴⁷ Smil, *Energy and Civilization*, p. 250.

⁴⁸ This is the argument of Peter O’Connor and Cutler Cleveland, “U.S. Energy Transitions 1780–2010,” *Energies* 7 (2014); we argue against it as an explanation for improving economy-wide efficiency in Suits,

roughly ten times as small as a steam engine of the same power. Indeed, the relatively tiny gas engines available led farmers to adopt them for household tasks like churning butter or pumping irrigation water early in the twentieth century.⁴⁹ But their most profound consequences for agriculture came through the tractor.

With gas engines, farmers could bring a self-propelled power source to bear on any number of farm tasks. The obvious uses of tractors were for plowing and the harvest, especially with the rise of the combine harvester across the Plains in the 1920s and 1930s, but even before the proliferation of combines, tractors could also be used to power stationary threshing equipment.⁵⁰ Farm tasks like hauling rock waste or stumps, sacking grain, or even being hooked up to an irrigation pump were commonly suggested uses.⁵¹ While farmers found the tractor unwieldy for road use—and consequently, less useful for hauling goods to market—the possible farm applications dazzled them.⁵² As the promotional book proclaimed (with typical turn of the century bombast) “I am the tractor, born of the spirit of man.”⁵³

By the 1920s, armed with these advantages, gas tractors surged in popularity—especially in the wheat and corn belts. From virtually nothing in 1910, 3.6% of farms owned a tractor by 1920—and 13.5% in 1930. These figures were even more remarkable in in the

Matteson, and Moyer, “Energy Transitions in U.S. History;” in summary, this supposes that the bulk of the trendline in energy intensity comes from *engines*—fuel density really only matters if you’re hauling energy around. However, most energy came in residential home heating, meaning that the density of fuel was largely immaterial—in fact, most fuel had to be hauled much *farther* later in American history, as locally-sourced firewood came to be replaced by distant coal mines.

⁴⁹ White, “Economic History of Tractors in the United States.”

⁵⁰ John Opie, *Ogalalla: Water for a Dry Land* (Lincoln, Nebraska: University of Nebraska Press, 2000 (orig. 1993)), pp. 42-3; see also Casson, Hutchinson, and Ellis, *Horse, Truck, and Tractor*, p. 137.

⁵¹ Casson, Hutchinson, and Ellis, *Horse, Truck, and Tractor*, pp. 137, 121.

⁵² Arnold Yerkes and L. M. Church, “The Farm Tractor in the Dakotas,” USDA Bulletin no. 1035 (March 1919), accessed 3/15/2021, <https://books.google.com/books?id=4M1BAQAAMAAJ>, p. 18.

⁵³ Casson, Hutchinson, and Ellis, *Horse, Truck, and Tractor*, p. 133.

wheat belt—8.4% in 1920 and over a quarter by 1930.⁵⁴ These numbers may seem unimpressive, but keep in mind that many farmers rented their tractors from neighbors, amplifying the usefulness of an individual vehicle several times over.⁵⁵ Moreover, the largest farms—the same ones that might have hired the most hands—adopted the tractor first.⁵⁶ By 1915, most farmers in North Dakota were familiar enough with tractors to give a reasonably informed estimate of how well tractors operated, how much time, money, and labor they saved, repairs needed, and how long they might last.⁵⁷ By 1919, the region was the subject of a case study for the USDA in how effective tractors might be.⁵⁸ But most strikingly, between 1920 and 1930, the total number of horses on farms had fallen by a third, reversing a trend that had lasted more than a century.⁵⁹ Even in per capita terms, the shift was stark. It was an abrupt shift in an agricultural energy regime that had been little modified since the country's founding:

⁵⁴ *Fifteenth Census of the United States, Agriculture, Volume 4: General Report, Statistics by Subjects* (Washington, D.C.: Government Printing Office, 1931), p. 530-5.

⁵⁵ Robert Ankli and Alan Olmstead, "The Adoption of the Gasoline Tractor in California," *Agricultural History* 55, no. 3 (Jul. 1981).

⁵⁶ Arnold Yerkes and H. H. Mowry, "Farm Experience with the Tractor," USDA Bulletin no. 174," 4/15/1915, Available online from Google Books, Accessed 3/15/2021, <https://books.google.com/books?id=h8pFAQAAIAAJ>, p. 30.

⁵⁷ Yerkes and Mowry, "Farm Experience with the Tractor," pp. 10-1.

⁵⁸ Yerkes and Church, "The Farm Tractor in the Dakotas.

⁵⁹ *Fifteenth Census, Agriculture, Vol. 4: General Report, Statistics by States*, p. 562.

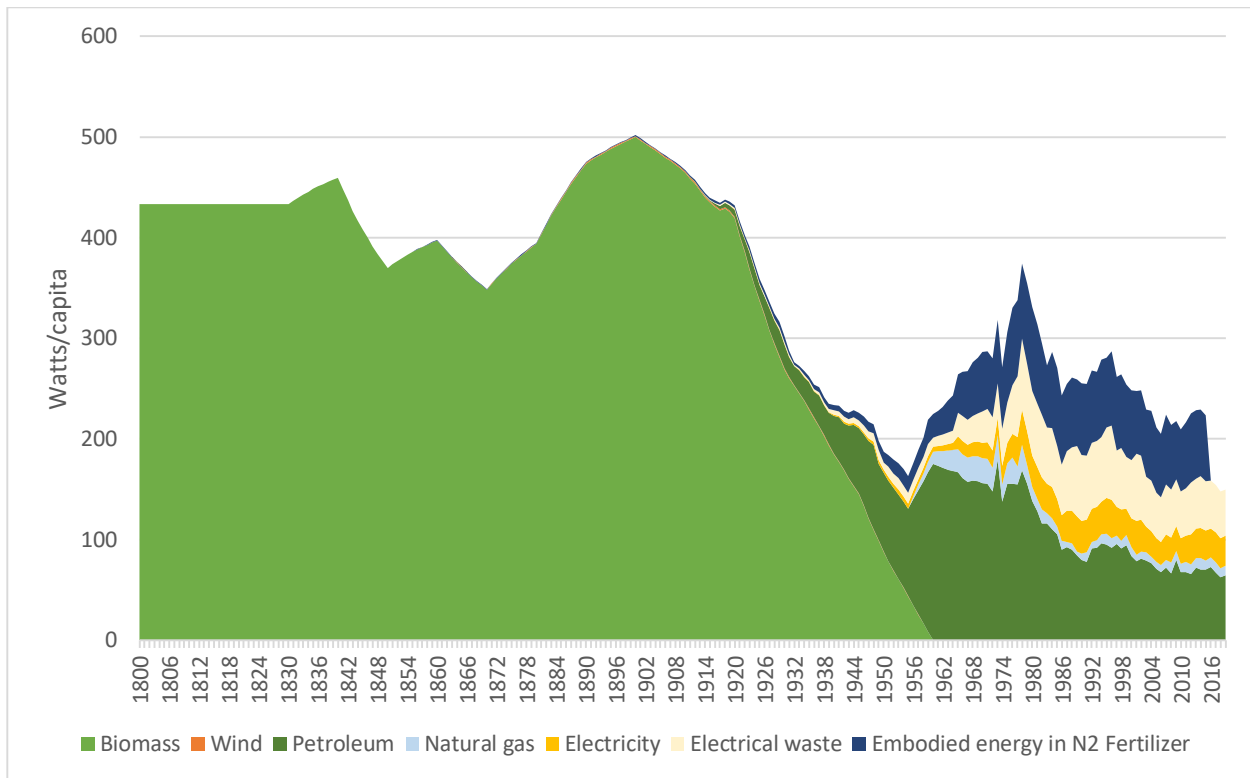


Figure 23. Chart: Agricultural Energy Use Per Capita, 1800-2019. Initially, there are three obvious phases of American agriculture represented here: horse-powered, lasting until the 1920s and 1930s; next, tractor-powered, and by the 1960s onward, the introduction of large-scale electrical energy—this last indicating the use of electricity to power mostly-automated industrial meat-farming facilities. However, the obvious division of on-field agricultural use obscures the massive increase in resources devoted to transportation, refrigeration, and processing in the late nineteenth century. Note also that, although the overall quantity of energy devoted to agriculture has increased over time, we are using less energy per person fed in agriculture today than Americans throughout the entirety of the nineteenth century—largely because of offloading energy costs to industrial processes that happen outside of farms themselves. SOURCE: image by author.⁶⁰

The surprising fact that on-field agricultural energy use actually declined between 1900 and 1950 suggests another reason for the popularity of tractors: unlike a horse, a tractor could be shut off. Regardless of how much work there was on a farm, a horse still

⁶⁰ Data from Suits, et al., “Energy Transitions in U.S. History.” “Electrical waste” here refers to the energy lost in generation and transmission of electricity from power plants to the end user. For the rise of a modern food complex, involving electricity-powered factory-farmed meat, see Claudia Hitaj and Shellye Suttles, “Trends in U.S. Agriculture’s Consumption and Production of Energy: Renewable Power, Shale Energy, and Cellulosic Biomass,” USDA Economic Information Bulletin, no. 159 (November 2016). Note that nitrogen fertilizer data only goes to 2017.

needed to be fed, all the way through the winter. Indeed, winter rations were only slightly reduced from working rations.⁶¹ Assuming a farmer had the capital to invest in a tractor, they would spend less by keeping it idle when out of use than they would on a hired team.⁶²

In short, tractor farm work could be molded to fit seasonal demands in a way that horses never could. And since horses largely worked in teams, requiring groups of men to do much of the tedious repetitive industrial tasks like cleaning, sorting, and fixing, the flexibility of a tractor-based farm was amplified by their smaller labor demands. The net effect of all of these trends was to replace a labor-intensive, land-extensive, steam-and-muscle agricultural economy—one where the micro-scale, dexterous work of planting and the harvest was mostly given over to humans, the mid-scale, mobile but high-powered work was given over to horses, and only the largest scale work like hauling grain to mills and the consumers was taken up by steam engines. This economy had seen the growth of horse populations and steam engines in tandem, rather than in competition, and it had relied on a massive, migrant labor force to man its fields. In its place rose a fully fossil agricultural economy, one where more and more parts of farm labor could be exchanged for the work of internal combustion engines, designed far away and requiring a different set of expertise to own, operate, and repair. Not every crop could be worked by machine—with fateful consequences for the later development of migrant work—but for grain agriculture, the shift was decisive.

⁶¹ See the estimates in Lewis A. Merrill, *Horse Feeding* (Logan, Utah: Experiment Station of the Agricultural College of Utah, 1902), C. F. Langworthy, *Principles of Horse Feeding* (Washington, D.C.: U.S. Dept. of Agriculture, 1903), Rufus C. Obrecht, *Feeding Farm Work Horses* (Urbana, IL: University of Illinois Agricultural Experiment Station, 1911), Harold A. Woodruff, *The Economics of Feeding Horses* (London: Baillière, Tindall and Cox, 1912), W. E. Carroll, *Feeding Work Horses* (Logan, Utah: Utah Agricultural Experiment Station, 1920), J. L. Edmonds, *Feeding Farm Work Horses and Mules* (Urbana, Illinois: University of Illinois Agricultural Experiment Station, 1922).

⁶² This flexibility is covered in depth by Olmstead and Rhode, “Reshaping the Landscape,” see especially p. 667.

But solving the climate problem with the internal combustion engine was not quite foreordained. Contemporary Great Plains agriculturists saw another path: diversification. Writing just before the 1909 harvest, one North Dakota farmer laid out the problem clearly: “We do not know at this moment how many additional men are needed during the harvest season... We are subject at this season to the caprices of the elements, and a brief delay may mean inestimable loss. The hired man must be on the spot, and he must be active and reliable.” But this, he wrote was simply an inevitable consequence of a single crop. The state should find crops that required care during the winter; for “if we had those conditions we would be less dependent on transients.... The one thing which will bring this about is the diversification of our farming industry... These things will give the hired man a job all winter, and he can afford to stay with us.”⁶³ Two years later, during the considerably more troubled summer of 1911, another farmer noted that climatic conditions were exacerbating the labor problem: “There is a partial crop failure in a few sections of North Dakota. In others a bountiful yield is assured. [...] If the farmers would avoid the expense and inconvenience and even loss inflicted by the harvest hand shortage, and they should do so for it is economic folly, they should engage in diversified farming.”⁶⁴ By planting a greater variety of crops, the noted agronomy professor P. G. Holden wrote in 1917, farmers could distribute “work throughout the entire year. [Rotation] calls for more efficient farm help, because it means steady employment. [...] In the great wheat-growing regions, the harvest and threshing seasons demand an army of harvest hands. Wheat is ripe—the work must be done rapidly

⁶³ "The Harvest Hand Problem," *Bismarck Daily Tribune* (Bismarck, ND), 7/31/1909, <https://chroniclingamerica.loc.gov/lccn/sn85042242/1909-07-31/ed-1/seq-4/>.

⁶⁴ "Harvest Help," *The Fargo Forum and Daily Republican* (Fargo, ND), 7/18/1911, <https://chroniclingamerica.loc.gov/lccn/sn85042224/1911-07-18/ed-1/seq-4/>.

or the crop is lost.”⁶⁵ Diversified farming, in this view, held the solution to the problem of climate, uncertainty, and labor.

But by the mid-1920s, the parameters of the labor problem had nearly completely inverted: contemporaries saw grain agriculture as synonymous with tractors—and manual labor reserved for other crops. In a series of hearings on Mexican immigration that we will return to, farmers from across the country testified to this connection. “[On] our land, especially during the war time... we have grown more wheat and continuous wheat until our lands are wheated out. It got so it did not pay, and we have turned our attention toward diversified farming—potato raising, and our latest crop is the growing of sugar beets,” testified a Mr. Sullivan, from the Red River Valley at the heart of the Plains. But his crop rotation had only ended up magnifying the labor problem: “You gentlemen, of course, know very well that there is a vast difference, so far as the demand for labor in producing a grain crop and producing a cultivated crop. The cultivated crop needs more help.”⁶⁶ “[I]f we are going to get back to the grainfields and the tractor, then we are going against all the precepts which have been given us from Washington,” testified a California farmer—noting that the Department of Agriculture had encouraged him to diversify for years. “Diversified farming needs and must have man power to succeed. Without it we will go back to the grainfields and the tractor.”⁶⁷ Similar accounts came from farmers in the in Montana, in the central Dakotas—and from the chair of the committee.⁶⁸ Everywhere, the story was the same: wheat

⁶⁵ P. G. Holden, "Safe Farming," *Grand Forks Herald* (Grand Forks, ND), 1/15/1917, <https://chroniclingamerica.loc.gov/lccn/sn85042414/1917-01-15/ed-1/seq-10/>.

⁶⁶ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers from Mexico: Hearings before the Committee on Immigration and Naturalization*, 69th Cong., st sess., 1926, *HathiTrust*, accessed 3/11/2021, <https://catalog.hathitrust.org/Record/102201729>,

⁶⁷ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers from Mexico*, p. 6.

⁶⁸ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers*, pp. 27, 88, 208, 298.

required perhaps some transient labor, but “To-day they cut it with an automobile machine that cuts the wheat and threshes it as it goes along, and four men can do all the work of cutting 20 acres of wheat in one day.”⁶⁹ “Diversified” farming—farming fruit or the sugar beet—required human labor still, but tractorization had made wheat a mostly more-than-human affair.

For hobos, many of whom relied on the wheat harvest to make a stake for the winter—by the early 1920s an annual average between 40,000 and 120,000—the coming of the tractor was devastating. A tractor could cut a wheat farm’s labor requirements eight-fold—but more importantly, they also radically reduced the amount of time required for the harvest.⁷⁰ Gone would be the days of two weeks of harvest on the average farm; gone would be the days of two months of threshing on the average farm. Work instead became considerably local, short, and small-scale: the requirement to borrow laborers from across the continent disappeared. Moreover, while a long strain of historiography has suggested that the automation of farms “freed up” labor for work in the cities, it is worth remembering that most hobos sought out rural work because they had nothing at home.⁷¹ As we shall read later, the replacement of the grain harvest with a new kind of crop had a constellation of effects—but the labor force that ended up working in these new fields looked very different from the hobo migrations of old.

The fossilization of agriculture was only one facet of a broader fossil republic. Trucks replaced muscle all over the economy, pushing horses out, requiring fewer men to operate,

⁶⁹ *Ibid.*, p. 298.

⁷⁰ For the figure of 8-fold, see Opie, *Ogallala*, p. 89.

⁷¹ Most hobos cited the search for work as the thing that prompted them to go on the road; see Anderson, *On Hoboes and Homelessness*, p. 69.

and becoming a crucial part of construction, logging, and mining operations.⁷² These decreased labor requirements and made the input of non-biological work sufficiently flexible to meet virtually any seasonal shifts in demand. The trend of increasingly small combustion engines would continue as the twentieth century wore on—by midcentury, shovels had been replaced by bulldozers and backhoes, saws by chainsaws, mining equipment by electrical machinery (the electricity usually supplied by fossil fuels). Work that had relied on a migratory, human labor force became increasingly mechanical. But it wasn't just labor that was replaced by fossils in this new economy—it was the land itself.

*** **

Fossil Water; Fossil Biomass

What happens after the death of a commodity frontier? In studies of environmental history and capitalism, the commodity frontier features heavily: an area rapidly integrated into the global capitalist system, whose natural resources are harnessed to produce commodities at an industrial scale. Usually, this entails the wholesale destruction of prior local ecologies. A commodity frontier relies on the incorporation of “cheap” or “free” land won by conquest, lowering the input prices and therefore the commodity prices in question.⁷³ The American Great Plains were just such a commodity frontier: seized,

⁷² Shane Hamilton, *Trucking Country: The Road to America's Wal-Mart Economy* (Princeton, New Jersey: Princeton University Press, 2008); Francesca Ammon, *Bulldozer: Demolition and the Clearance of the Postwar Landscape* (New Haven, Connecticut: Yale University Press, 2016); Amy Slaton, *Reinforced Concrete and the Modernization of American Building, 1900-1930* (Baltimore: Johns Hopkins University Press, 2001); Jason Newton, “Forging Titans: The Rise of Industrial Capitalism in the Northern Forest, 1850-1950” (PhD dissertation, Syracuse University, 2017)—note here that logging was likely the last of these industries to make the switch, due to the remote and rugged terrain proving treacherous for tires.

⁷³ Joshua, Specht, “Commodity History and the Nature of Global Connection: Recent Developments,” *Journal of Global History* 14, no. 1 (March 2019); see also Sven Beckert, *Empire of Cotton: A Global History* (New York: Alfred A. Knopf, 2014); Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Viking Press, 1985); and John Soluri, *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States* (Austin: University of Texas Press, 2005); Joshua Specht, *Red Meat Republic: A Hoof to Table History of How Beef Changed America* (Princeton, New Jersey: Princeton University Press, 2019);

distributed widely to white settlers, and their ecology transformed toward the cultivation of beef, wheat, and maize. But such booms always give way to busts—the frontier that was once the site of immense speculation and growth runs out of space; it fails to produce cheaply enough to match the products grown in still newer commodity frontiers. In the case of the American West, the price of wheat and beef both plummeted; the commodity frontier entered a long period of hardship. For the larger American republic, the story of American capitalism mostly moved on after the famous “close of the frontier” in 1890, as industry in Eastern and Midwestern cities generated ever-higher percentages of national GDP and exports into the twentieth century.⁷⁴ But what about the settlers who remained?

Imported fertilizers and groundwater irrigation began their rise virtually at the same time as the other events in this chapter, but their impact was somewhat muted until nearly midcentury. Most Great Plains and Midwestern farmers did not rely on the imported Chilean nitrates and phosphates, nor the subsurface water, that I cover in this section until the rural work transition was already well underway. Nevertheless, these elements were inextricably entangled with the rise of fossil fuels in the West, a major motivation for buying tractors to

Gregory Cushman, *Guano and the Opening of the Pacific World: A Global Ecological History* (New York: Cambridge University Press, 2013); Anna Lowenhaupt Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton, New Jersey: Princeton University Press, 2015); Paul Gootenberg, *Andean Cocaine: The Making of a Global Drug* (Chapel Hill, North Carolina: University of North Carolina Press, 2008); Timothy LeCain, *The Matter of History: How Things Create the Past* (New York: Cambridge University Press, 2017); Judith Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge, Massachusetts: Harvard University Press, 2001); Mark Kurlansky, *Salt: A World History* (New York: Penguin Books, 2003); Charles Mann, *1493: Discovering the New World Columbus Created* (New York: Vintage Press, 2011); Jason Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital* (New York: Verso Press, 2015); Raj Patel and Jason Moore, *A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future of the Planet* (New York: Verso Press, 2017).

⁷⁴ The U.S. Census Bureau noted that there was no unbroken “line” of “unsettled” counties in the 1890 census—and thus no coherent frontier; as famously noted by Frederick Jackson Turner’s 1893 lecture, “The Significance of the Frontier in American History.” Nevertheless, the seizure of lands from indigenous peoples—and the expansion of American imperialism across the Pacific—continued unabated. See Roxanne Dunbar-Ortiz, *An Indigenous Peoples’ History of the United States* (Boston: Beacon Press, 2014), pp. 117-177.

begin with, and an important secondary reason that the hobo work regime never recovered from the blows fossil fuels dealt it. Trucks and tractors prompted the beginning of the decline of hobos in the 1910s and 20s; fossil water and fossil biomass sustained both this decline and the rise of imported Mexican labor through the period of 1910-1950.

Knowing that their new home had unpredictable, often lackluster rainfall, Plains settlers tested prospects for irrigation quite early. Even during the lucky years of the 1880s, when settlement coincided with a wet period, settlers pushed the limits of which land could support crops, often ranging far into the west of Dakota, Nebraska, and Kansas—sometimes trying to support wheat farming in Colorado or Montana. Windmills offered one of the first potential solution for drier climates—relying on the nearly continuous Plains gusts to pump water from deep underground. By 1894, advertisers touted windmills that could reliably raise water 250 feet.⁷⁵ But this was not nearly deep enough—the vast majority of the subterranean water in the Great Plains lay far lower, in the mighty Ogallala Aquifer, a bed of gravel and sand containing leftover water from post-Pleistocene glacial melt—and even where they hit water at that depth, windmills were severely underpowered. Even if windmills had truly meant “every man who has 20, 40 or 80 acres of land can... own and control his own irrigation system,” that would not have been enough to make a viable wheat farm.⁷⁶ A still bigger problem was that windmills couldn’t even manage that, usually topping out at less than ten acres a pump. The ubiquity of windmills in the Plains landscape—and their later use for pre-grid electricity—often makes them a compelling story of a lost

⁷⁵ B. A. McAllester, "Irrigation by the Use of Windmills," *The Irrigation Age* 6, no. 1 (January 1894), p. 20.

⁷⁶ I. I. Diesem, "Irrigation from Wells by Wind Power," quoted in "Pulse of the Irrigation Industry," *The Irrigation Age* 6, no. 3 (March 1894).

alternative energy past; in fact, the windmill generated a miniscule amount of power, ultimately only good for the watering of herds of cattle.⁷⁷

Massive irrigation projects were less popular in the Great Plains than elsewhere in the United States, but they were tried. Most famous of these was the irrigation colony of Greeley, Colorado, founded by the utopian Nathan Meeker who sought to make a sort of family-friendly West: a city where each settler would contribute to the irrigation works, commit to schooling, family life, and temperance.⁷⁸ But this model simply did not work very well for the Great Plains writ large: most of the rivers were too small to irrigate much land.⁷⁹ The right of prior appropriation—a water law that Western settlers pioneered and which became universal in the region—dictated that those who had first used river water to irrigate had the right to that water, superseding those of later irrigators, even those who lived upstream. In a land with unpredictable stream flows, however, this was a disastrous tangle of legal rights, often meaning many irrigators were supposed to let the water flow past without interference to satisfy a downstream prior appropriation.⁸⁰ And truly large-scale irrigation projects usually foundered on the rivers' small size.

All of this meant that Western agriculture remained mostly rain-fed until the advent of the commercial internal combustion engine, and limited to the areas where there was enough rain to make that work. But the tractor and the stationary motorized irrigation pump fundamentally changed the equation. It opened up new lands that had never before been viable. Even when the technology was in its infancy, people lined up to purchase them. In the

⁷⁷ Opie, *Ogallala*, p. 116-22.

⁷⁸ See Greeley's initial call for applicants and subsequent applications: Boxes 1-5, Union Colony Letters Collection and Meeker Manuscript Collection, Greeley History Museum, Greeley, CO.

⁷⁹ Opie, *Ogallala*, pp. 1-14.

⁸⁰ Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1985), pp. 88-96; Opie, *Ogallala*, pp. 270-4.

ten years leading up to the Great Depression, for example, agricultural land under well irrigation (as opposed to river irrigation) nearly doubled, even though total irrigated land barely changed at all.⁸¹ Unlike surface water, subterranean water had none of the complex legal messiness around title or prior appropriation. “In some States the farmer is required to make application to the State for the right to appropriate ground water,” a government informational pamphlet informed farmers; “in other states it is assumed that all landowners have common and correlative rights to use percolating ground water underlying their lands to the extent of their needs, or of a reasonable share of the supply.”⁸² Well irrigation required farmers to depend on the technical expertise of outside engineers to site wells and avoid contamination.⁸³ It also meant longer work weeks as irrigation supervision became one of the chief tasks of farming.⁸⁴ But the freedom from regulation and the seeming dependability of having pumping infrastructure of one’s own more than outweighed that concern.

A series of town halls as part of a 1940s campaign to build a new irrigation project along the Platte River underlined well irrigation’s appeal. Harry Bashore, a frustrated former bureaucrat from the Department of Interior, lamented the sheer difficulty of convincing farmers that a large dam for irrigation was necessary—or even desirable. Sections of the Platte River had seen hundreds of irrigation pumps built in the 1920s—and tens of thousands in the 1930s.⁸⁵ The independence and lack of regulations around groundwater

⁸¹ United States Department of Agriculture, “Pumping from Wells for Irrigation,” USDA Farmers’ Bulletin no. 1404, Washington D.C.: Government Printing Office, 1924 (revised 1934), p. 1.

⁸² USDA, “Pumping from Wells for Irrigation,” p. 2.

⁸³ USDA, “Pumping from Wells for Irrigation,” pp. 2-3.

⁸⁴ Opie, *Ogallala*, pp. 140-2.

⁸⁵ “Platte Water Table Lower Now--Pumps May Require Regulation,” *Mid-State Farmer*, March 1947, Harry W. Bashore Papers, Box 10, “Missouri River Basin – Nebraska – Mid-State Project, 1941-1948,” American Heritage Center, Laramie, WY, p. 6; “Report of Hearing,” North Platte, NE, 1/14/1949, Harry W. Bashore Papers, Box 23, “Reclamation -- Nebraska -- Hearings of Department of Roads and Irrigation (1949),” American Heritage Center, Laramie, WY, p. 55.

found wide appeal among the settlers. But even when state and federal surveys of the terrain had found dangerous and rapid declines in the water tables of the region, pump irrigators still “vigorously opposed” state regulation.⁸⁶ Farmers denied that there had been any decline in groundwater, insisting they knew better than the government surveyors.⁸⁷ Ultimately, the government campaign appears to have succeeded by appealing to women voters, casting the massive irrigation project as key to a “bright future” for families throughout the region.⁸⁸ In its success, however, the Platte River project was very much an exception.

The fossil fuel revolution instead meant farmers increasingly turned to the ground for their water. Consequently, larger and larger areas were opened up for new agriculture. This coincided with a vast expansion in cultivable land rooted in tractorization: declining horse populations meant far smaller areas had to be devoted to hay and other feed, instead being given over to calories that ultimately ended up in human bellies.⁸⁹ The net effect of irrigation—opening areas in the arid Southwest, in river valleys of the Plains, and in California—and tractorization was that even after the supposed “close of the frontier” in 1890, agricultural land continued to expand in the United States across the early 20th century.

⁸⁶ On surveys: “Report of Hearing,” Fremont, NE, 11/23/1948, Harry W. Bashore Papers, Box 23, “Reclamation -- Nebraska -- Hearings of Department of Roads and Irrigation (1948),” American Heritage Center, Laramie, WY, p. 28. On opposition: Petrus Peterson, “A State Plan,” address at Kearney, Nebraska, 11/9/1945, Harry W. Bashore Papers, Box 10, “Missouri River Basin – Nebraska – Mid-State Project, 1941-1948,” American Heritage Center, Laramie, WY, p. 11; “Platte Water Table Lower Now--Pumps May Require Regulation,” *Mid-State Farmer*, March 1947, Harry W. Bashore Papers, Box 10, “Missouri River Basin – Nebraska – Mid-State Project, 1941-1948,” American Heritage Center, Laramie, WY, p. 6.

⁸⁷ “Report of Hearing,” Grand Island, NE, 1/10/1949, Harry W. Bashore Papers, Box 23, “Reclamation -- Nebraska -- Hearings of Department of Roads and Irrigation (1949),” American Heritage Center, Laramie, WY, p. 20.

⁸⁸ “To the Homemakers of the Mid-State District,” Political brochure March 1948, Harry W. Bashore Papers, Box 10, “Missouri River Basin – Nebraska – Mid-State Project, 1941-1948,” American Heritage Center, Laramie, WY.

⁸⁹ Alan Olmstead and Paul Rhode, *Creating Abundance: Biological Innovation and American Agricultural Development* (New York: Cambridge University Press, 2008), pp. 375-8.

Late in the period in question, meanwhile, settlers attacked declining soil fertility from a revolutionary source: industrial fertilizers. Crops must absorb elements like nitrogen and phosphorous from the soil in order to grow. Without some means of replenishing these elements (like crop rotation or manure), soils could be completely exhausted. The breathtaking growth of agriculture in the American West owed much to the startling fertility of its soils, nitrogen and phosphorous accumulated over centuries of native management. But just as startling was the rapidity with which white settlers depleted these soils, which eroded under poor plowing and whose nitrogen and phosphorous leached away. It was not a problem unique to the West: with fields failing in the nineteenth century, British and Eastern American farmers turned to guano (fossilized bird and bat dung, mostly from South Pacific islands) and later sodium nitrate (mineral crusts mostly found in the Atacama Desert in what is today northern Chile).⁹⁰ The soils of the West, on the other hand, needed no such reinforcement—at least, for a while. Between 1900 and 1930, however, nitrogen fertilizer use nationwide more than doubled each decade:

⁹⁰ Edward Melillo, “The First Green Revolution: Debt Peonage and the Making of the Nitrogen Fertilizer Trade, 1840-1930,” *American Historical Review* 117, no. 4 (October 2012).

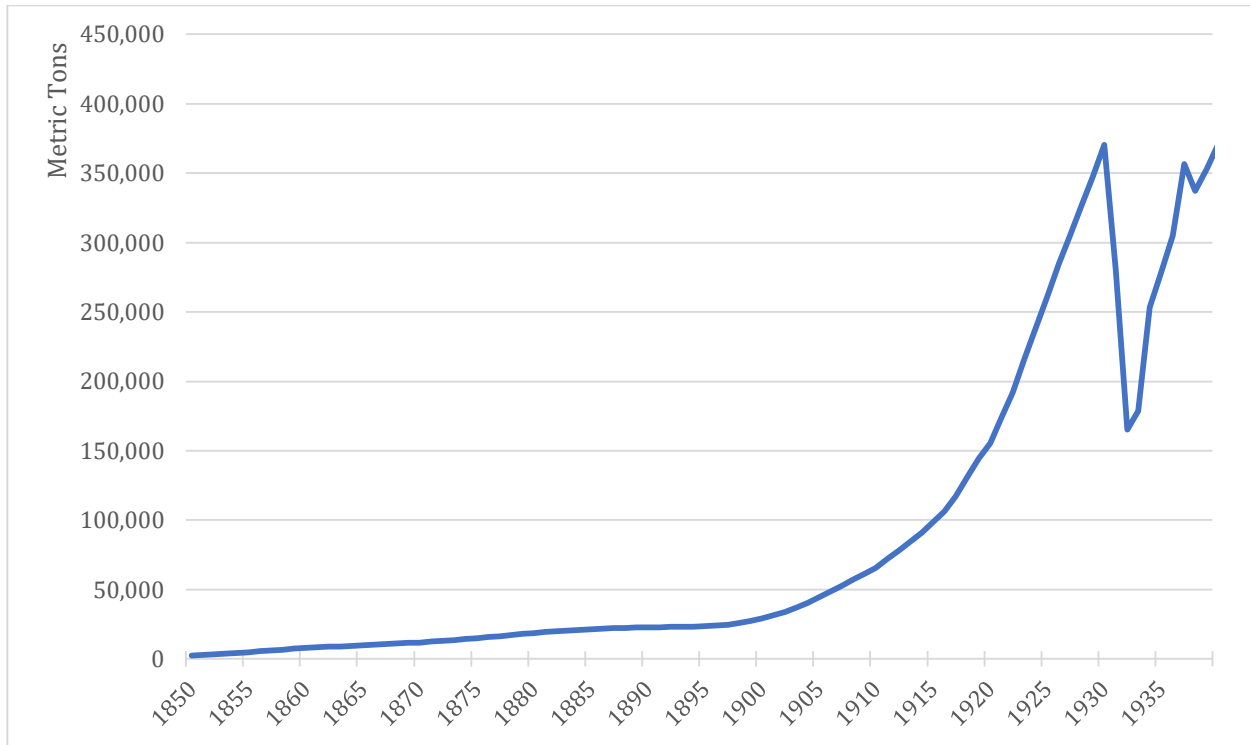


Figure 24. Chart: Annual Nitrogen Fertilizer Use in the United States, 1850-1940. Very early nitrogen fertilizer inputs in agriculture were limited to guano, largely shifting to mined nitrates from the Atacama Desert by the late 1800s. Although nitrate deposits were rapidly exhausted in the post-World War 2 period, the Haber-Bosch Process, sometimes called the most important invention in human history, allowed the extraction of limitless nitrogen—and thus, virtually limitless fertility—from the atmosphere, with biogeochemical consequences that are still unknown. SOURCE: image by author.⁹¹

Even in this period, use of such fertilizers did not grow as quickly in the American West as they did in the East.⁹² The wheat and maize crop—high volume and low value—only occasionally made artificial fertilizers worth it. Fertilizer use did, however, expand in the

⁹¹ Data from Peiyu Cao, Chaoqun Lu, and Zhen Yu, “Historical nitrogen fertilizer use in agricultural ecosystems of the contiguous United States during 1850–2015: application rate, timing, and fertilizer types,” *Earth Systems Scientific Data* 10, no. 2 (2018). For further information on historical nitrogen use, see Melillo, “The First Green Revolution,” and Vaclav Smil, *Enriching the Earth: Fritz Haber, Carl Bosch, and the Transformation of World Food Production* (Cambridge, Massachusetts: Massachusetts Institute of Technology Press, 2000). For the potentially geological consequences of this nitrogen use, see: Johan Rockström, Will Steffen, Kevin Noone, Åsa Persson, F. Stuart Chapin III, Eric F. Lambin, Timothy M. Lenton, Marten Scheffer, Carl Folke, Hans Joachim Schellnhuber, Björn Nykvist, Cynthia A. de Wit, Terry Hughes, Sander van der Leeuw, Henning Rodhe, Sverker Sörlin, Peter K. Snyder, Robert Costanza, Uno Svedin, Malin Falkenmark, Louise Karlberg, Robert W. Corell, Victoria J. Fabry, James Hansen, Brian Walker, Diana Liverman, Katherine Richardson, Paul Crutzen, and Jonathan A. Foley, “A Safe Operating Space for Humanity,” *Nature* 461 (2009).

⁹² *Fifteenth Census, Agriculture, Vol. 4*, p. 504-5.

West: in the Great Plains, particularly where the yields were highest and the soils most worked, and in new lands to the Southwest, valleys like California and Arizona.⁹³ Fertilizer served to concentrate labor in a much narrower band of agricultural land than before. It also served to increase—marginally—the area of land under cultivation, opening new areas to agriculture.⁹⁴

By the time these trends began to accelerate on the Great Plains, the hobo was already a labor force under assault by the changes wrought by fossil energy. Trucks had undermined their systems of travel; tractors had undermined the requirement for human labor in wheat and other “small grains,” and the crops that still needed hands needed them year-round. The demand for short-term migrant manual labor, in other words, had begun to fall away, and the longer-term manual labor had a much more predictable demand cycle—something that could be and eventually was easily filled by foreign workers. But although the trends were already in motion with rising fossil energy, there is no reason to believe they could not have stabilized relatively quickly—with some demand for hobo workers in the most stressed regions, where crop failures or harvest timings might create massive short-term labor demands. Indeed, some reversals took place in the New Deal era. But ultimately, the hobo did not triumph. Instead, the rise of pump irrigation and the rise of fertilizers served to further smooth out climatic and environmental instability.

Irrigation and artificial fertilizers meant that the era of natural variability was over. Each technology was designed to pull apart the preexisting loops that governed crop

⁹³ Cao, et al. Such fertilization appears to have taken the form of nitrates in the southern Plains, and urea—animal excretions—in the northern Plains. The latter points to another shift in land use, an increasing reliance on livestock to fertilize fields, connected to the rise of the sugar beet industry in the early 1900s. This is made clear in House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers*, pp. 83-4.

⁹⁴ Cao, et al.

growth—the water cycle and the nutrient cycle—and each used ancient accumulations of these materials to do so, accumulations tens of thousands or even millions of years old. But more importantly from the perspective of the farmer, uprooting these loops and instead applying external, fossil biomass and fossil water to the landscape smoothed out natural instability and unpredictability. The climate of the American West had always made agriculture a risky business, particularly the farther west you went. Irrigation rendered the microclimates plants inhabited predictable, as fertilizers did for their soils. If farming could be reduced to a series of inputs (insolation, air, water, and nutrients) and outputs (biomass), it was a simple optimization problem. It removed risk without also removing—as sustainable farming might have—profit. The West as commodity frontier—as a place with a particular ecological advantage in wheat production—had died. Industrial agriculture supplemented its decaying ecological bounty with irrigation and fertilizers, and patched its variability with fossil fuels instead of labor. The physical inputs were both measurable and, to an extent, controllable. But that only made it no better and no worse than anywhere else with the same technologies.

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The Second Western Work Regime

Just as the environment created the hobo, so it would also destroy him. Steam power left enormous gaps in the national energy system, requiring manual laborers to provide physical power across the nation's periphery. Together, the unpredictable climate of the American West, technology, and culture shaped that manual labor into one of perpetual precarity and migration—what I termed the first Western work regime. Together, the rise of automobiles, tractors, pump irrigation, and nitrate fertilization totally reshaped the

technological element of that work regime. The end result is that, between 1920 and 1940, the steam-and-hobo regime was entirely replaced by a new tangle of environmental, socio-economic, and legal systems, a new work regime centered around intensive small-scale fossil fuel use, guest worker and immigration law along with tightly regulated movement by train and truck, and an effectively rights-less Mexican-American transnational workforce.

This new work regime manifested first and most obviously in a broad geographic and economic shift of agricultural migrant labor away from wheat and towards new sugar beet and fruit crops. At the same time, this engendered a complex geographic shift away from the wheat country of the prairie and into riverside lowlands, lakeside orchards, and the arid or semiarid Southwest. This shift is not easy to understand, and most scholars have framed the rural manual labor shift as a complete discontinuity. Wheat mechanized in response to labor organization driving up the price of harvest hands, the argument runs, pushing out hobo laborers; at the same time, crops like sugar beets were cultivated for the first time, and recruited a completely different labor force (studies of the latter take this as their *starting point*, consequently they almost never consider the hobo as a potential laborer).⁹⁵ California agriculture, the same thinking goes, was captive to a set of dynamics highly specific to that state.⁹⁶ From a purely labor perspective, then, the timing appears to be more or less coincidental. This leaves us with a puzzle: the very same energy transition that led to the tractorization and eliminated harvest labor demands in wheat also allowed for small-scale irrigation projects and cultivation of lowland soils, giving rise to the sugar beet industry. Why, then, did the hobo harvest hand not simply shift to cultivating sugar beets?

⁹⁵ Valdés, *Al Norte*, pp. 1-3.

⁹⁶ Vaught, *Cultivating California*; Flores, *Grounds for Dreaming*.

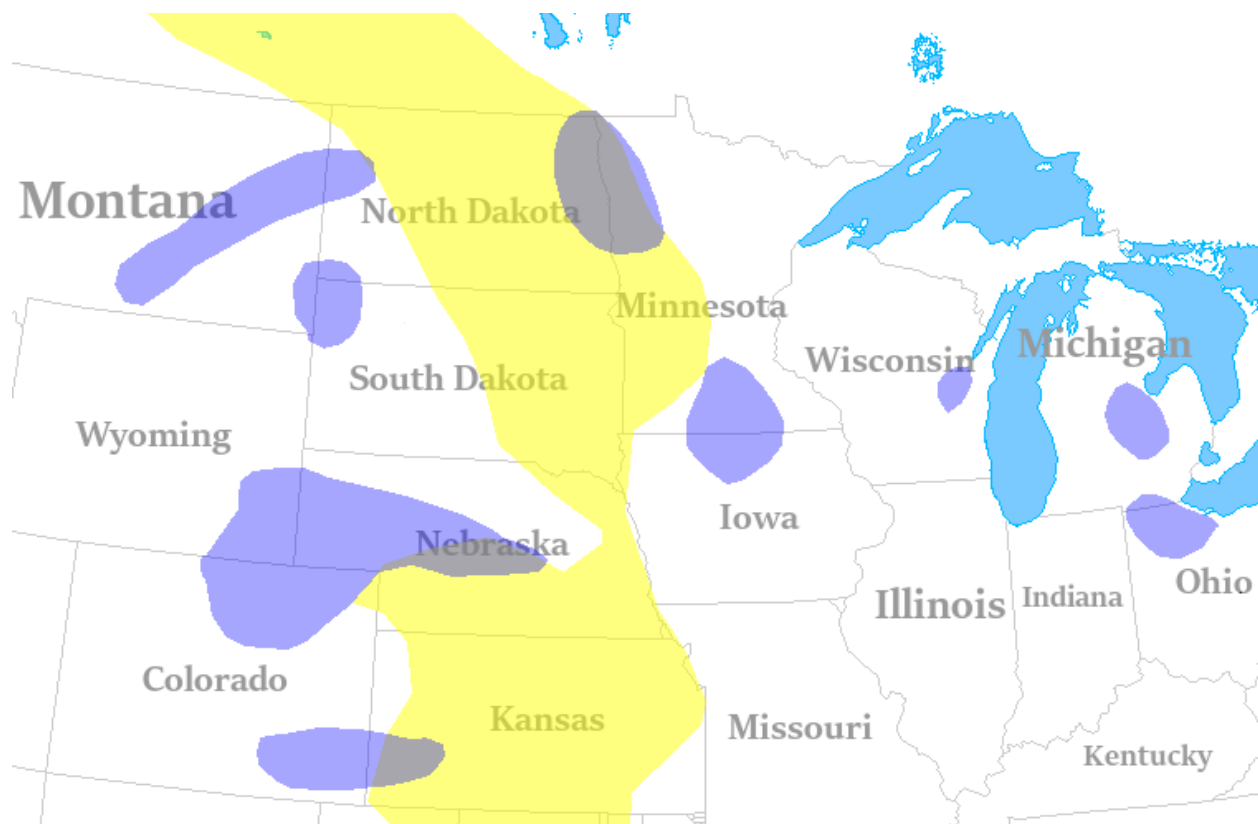


Figure 25. Map: Sugar Beets and Wheat in the Great Plains and Midwest, 1930. In this map, we can see that the principal areas where sugar beets were grown were either in river valleys to the West (too dry for rain-fed agriculture and so rarely wheat land), or in northern Midwestern fields. (Note that this map only indicates the area of cultivation and not the acreage within that area—relatively little of the land shaded in blue was devoted to sugar beets). Thus, although sugar beets drew on migrant workers as wheat did as well, it did not compete with wheat for acreage. SOURCE: image by author.⁹⁷

It was not for lack of work. While the wheat plant had been the sole object of migrant work in the late nineteenth century Great Plains, so the sugar beet became one of its objects in the early twentieth. The crop was grown virtually nowhere in the nineteenth century United States, with the only significant acreage in California. Rapidly growing domestic demand for sugar, particularly after German supplies dwindled during the First World War the sugar beet became one of the crops Great Plains farmers turned to when they looked to escape the spiral of lower wheat prices plaguing the region—but one that required advance

⁹⁷ These maps are adapted from *Fifteenth Census of the United States, Vol. 4: Agriculture*, Washington, D.C.: GPO, 1932, pp. 735, 822.

planning due to the “scarcity of the hand labor necessary to harvest the crop.”⁹⁸ Over the next 15 years, sugar beet acreage quintupled on the Plains.⁹⁹ By then, sugar beets became a lightning rod in the debate over Mexican immigration: well over half of the Great Plains testimony in the 1926 Congressional hearings on Mexican immigration came from sugar beet planters (with California fruit farmers the other major constituency)—sugar beet farmers who directly contrasted it with wheat and the tractor.¹⁰⁰

But all of this attention is, on the face of it, rather puzzling: even by 1930 wheat was still by far the more valuable crop in every part of the Great Plains except for Eastern Colorado. Where wheat still comprised about a quarter of the acreage and value of Great Plains farming, sugar beets were less than 2% of the total value, and even less that proportion of the acreage.¹⁰¹ Yet sugar beets received an outsized amount of attention from those concerned with manual labor on the Great Plains—and perhaps most importantly, they kickstarted the use of Mexican migrant labor on the Great Plains and in the Midwest.¹⁰² The sugar beet surfaced at a crucial moment in Great Plains agriculture—when manual labor and energy both shifted—and played a significant role in the debates over migrant labor at the time. As such, despite their relatively minimal acreage and value, they merit attention as a case study in how and why these shifts and debates happened.

⁹⁸ "Growing Sugar-Beet Seed," *The Herald-Advance* (Milbank, SD), 12/31/1915, <https://chroniclingamerica.loc.gov/lccn/sn00065154/1915-12-31/ed-1/seq-7/>.

⁹⁹ *Fifteenth Census of the United States, Vol. 4: Agriculture: General Report*, pp. 712, 736, 822. *Thirteenth Census of the United States, Vol. 5: Agriculture, Part I*, pp. 590, 694. *Thirteenth Census of the United States, Vol. 6: Agriculture, Part II*, pp. 90, 478. *Twelfth Census of the United States, Vol. 5: Agriculture, Part I*, p. cii.

¹⁰⁰ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers from Mexico*.

¹⁰¹ *Fifteenth Census of the United States, Vol. 4: Agriculture: General Report*, pp. 712, 736, 822. *Thirteenth Census of the United States, Vol. 5: Agriculture, Part I*, pp. 590, 694. *Thirteenth Census of the United States, Vol. 6: Agriculture, Part II*, pp. 90, 478. *Twelfth Census of the United States, Vol. 5: Agriculture, Part I*, p. cii.

¹⁰² Norris, *North for the Harvest*; Valdes, *Al Norte*.

A considerably more temperamental plant than wheat, the sugar beet demanded a much steadier set of growing conditions: a narrower band of temperatures and, in many places, irrigation.¹⁰³ It also required lengthy care in the field, largely by hand. Harrowing, the process of turning up soil around the plant, was brutally taxing work (particularly with the cheap, short-handled hoe that was popular at the time), and ought to be done at least two or three times through the growing season.¹⁰⁴ Constant weeding was vital, otherwise the competition from nearby plants would lower the beets' sugar content.¹⁰⁵ And while cultivators sought to mechanize the process as best they could to undercut these labor requirements, they do not appear to have been all that successful, especially in the 1910s and 1920s.¹⁰⁶ Certainly, the crop had been less experimented-with than wheat, but at least some of the resistance to mechanization was clearly biological—the plant itself resisted efforts at removing the human touch. Unlike wheat, whose germ was hard, easily tossed about and handled in bulk, broken and mishandled beets could lose valuable sugar content.¹⁰⁷ As a result, the use of mechanical power in beets most often surfaced in their transportation—farmers repeatedly stressed the need for good roads before they could take up cultivation.¹⁰⁸ This new industry, then, required a lot of manual labor, for much longer stretches than wheat.

¹⁰³ C. O. Townsend, "Sugar-Beet Growing Under Irrigation," USDA Farmers' Bulletin no. 567, Washington: Government Printing Office, 1914 (revised 1920), p. 2.

¹⁰⁴ United States Department of Agriculture, "Progress of the Beet-Sugar Industry in the United States in 1909," USDA Report no. 92, Washington: GPO, 1910, p. 19. For the physical difficulty of hoeing, see Norris, *North for the Harvest*, pp. 24-6.

¹⁰⁵ Townsend, "Sugar-Beet Growing," pp. 22-5.

¹⁰⁶ Note the repeated attempts at mechanization more than a decade apart: USDA, "Progress of the Beet-Sugar Industry," p. 14, and Townsend, "Sugar-Beet Growing," p. 2, both of which are framed as future possibilities.

¹⁰⁷ H. Claasen (author), William T. Hall and George William Rolfe (trans.), *Beet-Sugar Manufacture, Second Edition*, New York: John Wiley and Sons, 1910 (orig. pub. 1906), pp. 3-12.

¹⁰⁸ Mark Burke, interview with D.E. Yale, transcribed by Henry Luther, in "Transcript of notes of interviews with divers parties in Western Nebraska, taken for the Great Western Sugar Company, by Mark Burke, Civil Engineer, July Twenty to July Twenty-Two, Inclusive," Denver Public Library, Denver, CO, p. 1.

In initial surveys of farmers in the Platte River Valley—one of the first areas (along with the Red River of the North and central Michigan) to cultivate sugar beets at large scale—the American Sugar Company consistently found labor to be the biggest remaining obstacle to growing the new crop.¹⁰⁹ “It was pretty hard to get beet tenders, that was the principal difficulty we had,” one farmer claimed in a 1916 interview; “The beets were all right, this country will raise fine beets... but some of our help did a good deal more damage than they did good.”¹¹⁰ Early sugar beet cultivators, like those along the upper Platte in Colorado, had typically relied on immigrant European (particularly Russian) families to take care of the crops.¹¹¹ But that began to shift after the First World War, with the American Sugar Company estimating that a workforce that had been “almost 100 per cent white” shifted to “40 per cent white and 60 per cent Mexican” by 1926.¹¹² At the same moment that hobos found themselves out of work in the wheat fields, the labor requirements of the sugar beet and fruit industries had surged. Why the turn to Mexican labor? Why not the recently unemployed hobo—the hobo who still passed through the very same communities? For the hobo, the devil lay in the details.

The key for hobo harvest hands had been in the hyper-specific and sudden surge of labor the wheat industry demanded. A wheat field at harvest time required *twenty to thirty times more manual labor* than at any other point in the year. The onset of the harvest surge

¹⁰⁹ Mark Burke, “Report on Irrigated Lands under Western Irrigation District: Eaton & McGrath and Miller & Warren Canals, Nebraska,” Unpublished Report to the Great Western Sugar Co., 1916, Denver Public Library, Denver, CO.

¹¹⁰ Burke, “Report on Irrigated Lands,” p. 8.

¹¹¹ Mark Burke, interview with D.E. Yale, transcribed by Henry Luther, in “Transcript of notes of interviews with divers parties in Western Nebraska, taken for the Great Western Sugar Company, by Mark Burke, Civil Engineer, July Twenty to July Twenty-Two, Inclusive,” p. 17. See also Norris on more general European immigrant labor in the sugar beet industry, pp. viii, 1-3.

¹¹² House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers from Mexico*, p. 155.

was unpredictable, owing to the Great Plains climate, which could delay harvests or completely destroy crops in areas seemingly at random, and certainly without warning. This meant only domestic labor would suffice for the task—workers essentially had to hover for weeks waiting for the harvest; none of the farmers could contract more than a week or so in advance for their whole labor force.

The sugar beet, on the other hand, worked in very nearly the opposite way. Labor demands at harvest time appear to only have been around twice as much as those for the rest of the year.¹¹³ Roughly half of the workers, then, could stay on through the entire year. Irrigated cropland—particularly when fed by dammed reservoirs or aquifers—was much less vulnerable to the constant Great Plains threat of drought. A farmer growing sugar beets needed a lot of help, but the far more consistent labor requirements meant it could—and should—be contracted far in advance. (Most of the same dynamics, it should be noted, were at play in fruit cultivation.) That predictability and reliability meant farmers could reach for labor much farther afield. Fossil fueled cultivation, in other words, eliminated climatic risk for the employer—and therefore meant it no longer had to be shunted onto the worker. It effectively eliminated climate precarity—and replaced it with a new kind of precarity, one predicated on transnational migrant work.

Mexican migrant workers had begun to enter the United States long before this transition. American investors funded railroad links from the central plateau and the Valley of Mexico north to El Paso in 1884.¹¹⁴ Moreover, the border between the two countries had

¹¹³ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers*, p. 90. A farmer here cites that he keeps two out of five families on the farm all winter—and that more are retained during the summer but outside of the harvest. This is corroborated by other testimony; e.g., p. 109.

¹¹⁴ Hernández, *Migra*, p. 35.

virtually no controls, with the modern system of restricted travel only emerging in the 1920s.¹¹⁵ Nevertheless, few workers made the trip, and employers from the Plains to California relied instead on the far larger body of Anglo-American workers who regularly traveled out to agricultural and industrial areas in the West. Racism certainly played a role as well. The belief that traveling from one climate to another was hazardous to a migrant's health (and that, consequently, persisted long into the twentieth century, finding its way into a highly respectable scholarly publication as late as 1927).¹¹⁶ More overtly, a handful of harvest hand advertisements in Kansas around the First World War explicitly requested only white, English-speaking hands, suggesting that Spanish-speaking laborers had become common in the industry—if far less common than English-speaking (white or black) peers.¹¹⁷

But Mexican immigration to the United States accelerated substantially during the acute labor shortages caused by the First World War: from a net movement of over 100,000 in 1900 and 220,000 in 1920 to 486,000 by 1920 and 890,000 by 1930.¹¹⁸ After the enactment of immigration restrictions, at least 200,000 Mexicans entered the country illegally in the 1920s.¹¹⁹ Most of both groups hailed from the Central Plateau, especially Guanajuato, Michoacán, and Jalisco, where inequality of land and income was most acute.¹²⁰ Daily wages in the United States could be up to eight times higher than those in Mexico, further driving

¹¹⁵ Ngai, *Impossible Subjects*, pp. 17-20.

¹¹⁶ Gamio, *Mexican Immigration to the United States*, pp. 14-21.

¹¹⁷ "Need 4,000 Men in Oklahoma," *The Topeka State Journal* 6/8/1922, <https://chroniclingamerica.loc.gov/lccn/sn82016014/1922-06-08/ed-1/seq-2/>; "Plans for Handling Harvest Labor," *The Daily Ardmoreite* (Ardmore, OK), 5/10/1915, <https://chroniclingamerica.loc.gov/lccn/sn85042303/1915-05-10/ed-1/seq-3/>.

¹¹⁸ Gamio, *Mexican Immigration to the United States*, pp. 2-3.

¹¹⁹ Gamio, *Mexican Immigration to the United States*, p. 10.

¹²⁰ Gamio, *Mexican Immigration to the United States*, pp. 14-23.

the trend.¹²¹ Mostly, they ended up in border states like California and Texas, or the agricultural belt of Illinois, Indiana, and Michigan.¹²²

As first-time sugar beet planters dreaded finding adequate help, sugar companies tapped directly into this mass movement to supply them. Companies met workers in El Paso and other Texas cities to recruit them and their families, sending them north across the Plains and Midwest.¹²³ The process was simple, one Red River farmer testified to Congress: he simply applied “for so much labor on our field, and their labor agent endeavors to secure that labor for us.”¹²⁴ Many of these migrants came by rail, meeting farmers at nearby towns, but when others began to settle long term in border states, they drove to a beet farm in spring and drive back down in winter.¹²⁵ When especially nativist Congressional leaders pressed the sugar companies for reasons why they couldn’t hire American labor, the answers were quite simple. Domestic labor was insufficient, they claimed; Americans simply did not seek to do manual labor anymore: “The floating element of labor in our country is gone.”¹²⁶ Another testimony from a North Dakota farmer echoed this, albeit with slightly more nuance—white Americans helped with the wheat harvest, but the Dakotas and Minnesota suffered greatly from their monocropping. “Our soil has become wheat sick,” he said, pointing to a decline in the spectacular yields farmers had won early on in the Great Plains—and connecting it to the Plains’ labor situation.¹²⁷ “We do get this transient labor, which comes to us each fall for the harvest and threshing season... but we have, practically

¹²¹ Gamio, *Mexican Immigration to the United States*, pp. 38-40.

¹²² Gamio, *Mexican Immigration to the United States*, p. 4.

¹²³ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers*, p. 29.

¹²⁴ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers*, p. 31.

¹²⁵ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers*, pp. 101, 120.

¹²⁶ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers*, p. 73.

¹²⁷ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers*, p. 204.

speaking, no permanent supply of farm labor in the Northwest.”¹²⁸ Going unmentioned by the farmers were the personal relationships they built with individual Mexican families, contracting them to return year after year, or stay throughout the winter.¹²⁹ Families came to be preferred, as they were more likely to stay over the long term, with the children and women lending a hand in the field as well as contributing unwaged domestic labor.¹³⁰

The obvious financial draw aside, migrant work for Mexicans remained as dismal as it had been for hobos. Complaints of poor food, of American immorality rubbing off on the younger generation, and concerns over assault and murder surfaced repeatedly.¹³¹ Fraud was not uncommon, either, as Concepción Laguna de Castro related to sociologist Manuel Gamio in an interview. Dragged into the harvest by her husband, they found the rooms cold and unheated, and the cotton fields of the farmer completely barren.¹³² Intending to leave, they were warned by “one who had been there before,” who “said that the owner of the plantation, a woman by the name of Smith, had men who would beat them up.”¹³³ She would let them leave—but only if they paid for the food they’d eaten.¹³⁴ Upon returning to town, she tried to see what legal action could be taken, and found out that it was a regular occurrence: “when her cotton crop isn't good she counts on making some money from the grocery store which belongs to her and from which she supplies the laborers. She gets them with a lie, promising that if they don't work they will be given food free, but she afterward

¹²⁸ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers*, p. 208.

¹²⁹ Norris, *North for the Harvest*, pp. 10-1.

¹³⁰ Gamio, *Mexican Immigration to the United States*, p. 44.

¹³¹ Gamio, *Mexican Immigration to the United States*, pp. 86-9; Manuel Gamio, *The Mexican Immigrant*, New York: Arno Press, 1969 (original publication: 1927), p. 18.

¹³² Gamio, *The Mexican Immigrant*, pp. 76-7.

¹³³ Gamio, *The Mexican Immigrant*, p. 77.

¹³⁴ Gamio, *The Mexican Immigrant*, p. 77.

demands payment for this food.”¹³⁵ More evocative still were the songs Gamio recorded among the laborers: “Oigan y oigan el ferrocarril bramar; el que lleva a los hombres y nunca los vuelve a traer”—“Listen, listen, to the train puffing; the train which carries men away and never brings them back again.”¹³⁶

Despite the racism that confronted many migrants journeying north, however, Mexican migrant laborers cannot be simply cast as more easily leveraged or intimidated than their white counterparts. The 1910s and 1920s are rife with examples of immigrant workers striking, organizing, and fighting for better wages and conditions.¹³⁷ Indeed, one hobo commented that they found the immigrants *more* able to take labor action, telling an investigator “the labor conditions for the 'white men' are much worse than for the 'foreigners', the latter stick together and help each other, while the 'white men' live separately each for himself alone.”¹³⁸ Admittedly, Mexican workers usually found themselves excluded from the larger labor unions, especially the American Federation of Labor (AFL)—and those which accepted Mexican workers, like the IWW, often themselves served as a black mark on a laborer’s record.¹³⁹ But just as weak organization among the hobo had not precluded labor action, so it did not among the new group of migrant workers. Unlike the late twentieth and early twenty-first century, involuntary deportation was not a serious threat, even to undocumented workers—the enforcement capacity simply did not exist.¹⁴⁰ Rather than for their “exploitability,” the transnational migrant worker was useful

¹³⁵ Gamio, *The Mexican Immigrant*, p. 78.

¹³⁶ Gamio, *Mexican Immigration to the United States*, p. 93. Translation in original.

¹³⁷ Flores, *Grounds for Dreaming*.

¹³⁸ Interview with U.B. Martin, in the *U.S. Commission on Industrial Relations, 1912-1915: Unpublished Records of the Division of Research and Investigation: Reports, Staff Studies, and Background Research Materials*, microfilm collection, reel 6.

¹³⁹ Valdés, *Al Norte*, p. 12.

¹⁴⁰ Balderrama, *Decade of Betrayal*, pp. 49-72.

because they accepted lower wages and because they often came with families and so tended to stay on jobs longer—with the trade-off that it was harder to arrange to get one, especially as a lone farmowner. Their value only rose when long-term contracts became the norm for agricultural work.

The result was that, during the fight over immigration policy in the 1920s that introduced quotas, founded the Border Patrol, and widely targeted immigrants of color, agribusiness fought to carve out broad exceptions for Mexican immigrants.¹⁴¹ The centers of this lobbying were in the fruit and sugar beet centers of production we have already seen—the places that were beginning to employ these long-term workers—and needed more of them than ever before.¹⁴² These were the very same places that had been opened up by petroleum (through the use of trucks for transport and pumps for irrigation), but which still required extensive manual labor for cultivation. Farmers drew the bounds of their lobbying quite carefully, suggesting various provisions for keeping these immigrant laborers in farmwork.¹⁴³ This, they cast as being the sort of work no white men wanted to do, with one stating bluntly that “The class of labor that we do want are not going to interfere very much with an intelligent laboring man.”¹⁴⁴ Broadly, they succeeded, despite widespread racist nativist sentiment.

This situation began to turn with the arrival of the Great Depression. Soaring unemployment and declining wages contributed to a surge of political activity hoping to exclude Mexican—and Mexican-American—migrant workers from the country. As

¹⁴¹ For more on these policies, see Hernández, *Migra*, pp. 19-45; Ngai, *Impossible Subjects*, pp. 21-55.

¹⁴² Note that the primary testimony in the hearings on immigration reform came from growers in the sugar beet industry and fruit industries. House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers from Mexico*.

¹⁴³ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers from Mexico*, pp. 44,72.

¹⁴⁴ House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers from Mexico*, p. 76.

government policy turned, police employed targeted raids on the epicenters of immigrant culture as a terror tactic.¹⁴⁵ Voluntary deportations relied on the fear this generated—along with the assurance that those who cooperated with this would be prioritized in later visa queues.¹⁴⁶ Meanwhile, the Revolutionary Mexican government cooperated and encouraged its expatriates to return home, hoping to bring the technology and skills they had picked up from work in the United States into Mexico’s own agricultural sphere.¹⁴⁷ Returnees often found themselves caught in between, with social restrictions on women and children and poor infrastructure in Mexico hardly matching what many of them had grown up with across the border.¹⁴⁸ Ultimately, rising racism and tightening legal and carceral controls in the Great Depression would set the tone for future debates over migrant work—on both sides of the border—well into the twentieth and twenty-first centuries.¹⁴⁹

None of this is to suggest that the influx of new migrant workers wholly replaced the hobo. In California, where the various harvests continued to draw in a massive labor force across the entirety of summer and autumn, hobos often played a vital role in certain specific, key industries. Agriculture with sustained labor needs, like fruit and trees, most frequently appeared to lobby Congress for immigration exceptions.¹⁵⁰ Others, like wheat and hops, did not—and appeared to retain a mostly-white workforce quite a bit later than their

¹⁴⁵ Balderrama and Rodriguez, *Decade of Betrayal*, p. 56.

¹⁴⁶ Balderrama and Rodriguez, *Decade of Betrayal*, pp. 50-1, 99.

¹⁴⁷ Balderrama and Rodriguez, *Decade of Betrayal*, p. 158; Cohen, *Braceros*.

¹⁴⁸ Balderrama and Rodriguez, *Decade of Betrayal*, pp. 193-211.

¹⁴⁹ Hernández, *Migra!* p. 38; Cohen, *Braceros*, pp. 27-8.

¹⁵⁰ Indeed, those testifying in House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers from Mexico* were almost *exclusively* from the sugar beet, fruit, and tree industries, with a few ranchers as well.

contemporaries.¹⁵¹ Eventually, once these industries mechanized like their counterparts on the Great Plains, the need for the hobo evaporated.¹⁵² The bulk of manual work remaining—in agriculture—was that requiring long-term contracts, well-suited to the complex labor arrangements that included Mexican migrants.

This does not account for work *outside* of the agricultural sector. The movement of Mexican-Americans went largely unregulated, but their communities centered in border states and large centers of exchange, like Kansas City or Chicago.¹⁵³ This made them poor candidates for the sort of ad hoc piecework like week- or day-long construction jobs. Hobos remained well-suited for these jobs, but they ultimately could not sustain hobo culture. The undermining of hobo movement—the rise of the automobile, the decline of the steam train, and the increasing use of petroleum-powered machinery in the workplace—seem to have driven the steady decline of the hobo in these industries, more than any structural shift within the industry.

For a brief moment in the 1930s, the idea of the “migrant” took an entirely new cast. The Dust Bowl of the early part of the decade, coupled with catastrophic unemployment, drove many farmers from their homes in the Great Plains—particularly tenants and others already riding the edge of poverty. Reluctant to give up rural lives, many emigrated en masse to places where rumor had it that life was a little better—by and large, California and the West Coast. These “Okies” (short for “Oklahomans”) found conditions that are broadly reminiscent of any other migrant group—widespread exploitation, ad hoc settlements by the

¹⁵¹ In testimony from a North Dakota agricultural representative, he takes pains to reassure the committee that Mexican labor will not compete with wheat growers: House Committee on Immigration and Naturalization, *Seasonal Agricultural Laborers from Mexico*, p. 29.

¹⁵² Much of this mechanization appears to have taken place in the 1930s; see Olmstead and Rhode, *Creating Abundance*, p. 374.

¹⁵³ Gamio, *Mexican Immigration to the United States*, pp. 23-9.

roadside and railroad side, and limited, precarious work. Those who managed to secure plots of land in California usually found that it was unworkable—the long history of California agriculture invariably meant that the best lands were already occupied. Altogether, the Okie experience roughly lived up to its famous dramatization in Steinbeck’s *The Grapes of Wrath*.¹⁵⁴

The Okies, however, were little more than a transient phenomenon. Next to both hobos and Mexican-American immigrants, they come across as down-on-their-luck petit bourgeoisie more than anything else. Traveling to jobs via car with their families, they neither joined the classic hobo movement of people by beating the rails, nor did they become absorbed into the long-term seasonal labor contract market dominated by Mexican-American workers.¹⁵⁵ Ultimately, they serve mostly as a point of contrast for the other two groups. Virtually the moment this group came to the notice of the federal government, they became the target of massive relief programs that sought to place them into new jobs.¹⁵⁶ These programs ultimately incorporated a would-be new generation of hobo as well; policymakers sought to keep white men off the streets and in homes, cementing the place of Mexican-American as the racially-coded quintessential migrant worker.¹⁵⁷ As we will touch on briefly in the dissertation’s Conclusion, the path of transient, homeless white Americans in the latter half of the twentieth century would be quite a different one.

In the end, the diffusion of fossil-fueled work toward the periphery had fundamentally altered the long-lasting tangle of socioeconomic, legal, and ecological systems

¹⁵⁴ These are directly compared in McWilliams, *Ill Fares the Land*, p. 15.

¹⁵⁵ McWilliams, *Ill Fares the Land*, pp. 30-50.

¹⁵⁶ McWilliams, *Ill Fares the Land*, pp. 47-8.

¹⁵⁷ For the history of would-be hobos incorporated into social welfare programs, see Todd DePastino, *Citizen Hobo: How a Century of Homelessness Shaped America* (Chicago: University of Chicago Press, 2003), pp. 195-220.

of the West. The first Western work regime bound together several trends: the bulkiness of steam driving a need for manual labor in the periphery, an unpredictable climate coupled with overwhelming focus on wheat production that made that labor ad hoc and precarious, steam transportation with easily stolen rides, and a legal regime that encouraged constant movement. By contrast, the second Western work regime coupled widespread non-human, non-living, automated work through the internal combustion engine, fossil fuels smoothing over climatic instability in agriculture, a more diverse agricultural sector, and workers who generally either owned automobiles or had their work arranged for them, bound up in immigration policy that encouraged the increasing racialization of Mexican migrant workers. As the trends in the first regime reinforced one another, so did these latter trends. Many of the same ecological factors were at play—but a radical shift in energy systems had engendered a massive shift in the shape of work at the micro and macro level.

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Conclusion

Over the long term, the United States has virtually never abandoned an energy source. The arrival of coal only slightly displaced wood; the arrival of oil did not reduce coal consumption, and so on.¹⁵⁸ As a result, scholars hold that the popular idea of an “energy transition”—society taking up one fuel and giving up another—has virtually never happened before.¹⁵⁹ Rather, energy transitions happen in how we *use* fuels. Between, say, 1920 and 1940, oil did not replace coal—internal combustion replaced external combustion. As this chapter has shown, the miniaturization of power allowed by technological innovation

¹⁵⁸ Suits, Matteson, and Moyer, “Energy Transitions in U.S. History.”

¹⁵⁹ Vaclav Smil, *Energy Transitions: History, Requirements, Prospects* (New York: Praeger Publishers, 2010).

around the internal combustion engine reshaped rural American life. It allowed employers to cut costs but cutting muscle. Oil displaced muscle power across agriculture and construction; it would continue to do so in ever more remote places and sectors across the remainder of the twentieth century. In so doing, it changed what kinds of labor were needed on a given worksite. In turn, oil displaced the laborers, as well.

What is striking about this process in the American West is that many of the underlying ecological and economic factors that underlay the first Western work regime had not changed. The climate remained infamously capricious, and major droughts ravaged the Great Plains in the 1950s, 1980s, and 2010s. But where capitalism had solved failed harvests by ratcheting the number of workers up or down, they now put in more or less fossil fuels, water, and biomass. The exploitation of labor simply happens in industries other than wheat. As I explore in the conclusion, this has not eliminated climate precarity—but its form has dramatically changed.

The construction of the first Western work regime corresponded with the settlement of the Great Plains—and more broadly, the opening of grasslands globally. The settlement of the Russian Ukraine, of the Argentine pampas, and the Australian Outback, all relied on the steam engine, migrant manual laborers, and vast expanses of previously little-cultivated soils. Here, I would suggest that the second Western work regime also had parallels in a global process, in which these grasslands, once the leading edge of capitalist expansion, lost importance as commodity frontiers. Globally, the expansion of agricultural land began to rely increasingly on the use of fossil fuels, on irrigation (aquifer and reservoir), and on nitrates and later atmospheric nitrogen and mined phosphorous—that is, rather than the pseudo-

fossil systems of extensification, it became a process of fossil intensification.¹⁶⁰ In the United States, this shift held profound implications for laborers: fossil-fueled tractors simultaneously displaced black sharecroppers in the South and hobos in the West. Only further work can illuminate whether simultaneous labor transitions occurred in these other former capitalist peripheries—from a steam-and-muscle economy to a petroleum-based economy.

Broadly, oil changed the relationship of the world to nature. Previous scholarship has noted the way that seasonality meant less and less to an industrializing America. The American economy became increasingly able to deliver fresh crops and meat to consumers regardless of whether it was in season or not.¹⁶¹ As this dissertation should make clear, much of that agricultural de-seasonality was built on the immiseration and precarity of workers on the frontier. Today, that same erasure of natural variability is instead built on a towering edifice of fossil fuels.

It is important to note that, despite the shift in rural American work, aspects of the old system endured. Where manual labor remained present in agricultural work, it continued to be performed by an exploited, underpaid class of mobile, migratory workers. Despite the shift in crops cultivated, familiar arguments and rhetoric are applied in opposing unionization and regulation in farming today as they were for hobo farmworkers in the nineteenth century. In non-agricultural work, day labor has persisted, barely changed in respects ranging from recruitment to the peripatetic nature of its workers. Ultimately,

¹⁶⁰ John McNeill and Peter Engelke, *The Great Acceleration: An Environmental History of the Anthropocene since 1945* (Cambridge, Massachusetts: Harvard University Press, 2016); Rockström et al., “A Safe Operating Space for Humanity.”

¹⁶¹ For more on the erasure of seasons, see William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton & Co., 1991), pp. 230-5.

however, the paths of American migrant workers, homeless, and the radical fringe—once a largely-overlapping triad—diverged, crowbarred apart by the racialized nature of the welfare state in the twentieth century. These three loose ends largely fall outside the scope of this project. Together, however, they suggest a new legacy of the American hobo: not merely as a misunderstood outcast, essential to building the fringe of American industry, but as an illustration of the economic precarity that future climatic instability invites.

Conclusion

Hobos and Climate Catastrophe



Figure 26. Photograph: Farmworkers Laboring Through a Nearby Wildfire, 2020. United Farm Workers image, taken during the 2020 California wildfires, which have turned the sky orange with soot. The workers are wearing masks both to protect against infection by COVID-19 and to filter out air pollution. Original caption from the UFW reads: "Erick shared this photo arriving to work in King City CA. He shares 'There is nothing heroic about what we do. We work out of necessity.' If the air quality index surpasses 150, employers must provide respiratory protection equipment such as N95masks or similar. #WeFeedYou" SOURCE: United Farm Workers, Twitter Post, September 10, 2020, 6:15 PM, <https://twitter.com/UFWupdates/status/1304196728208461825>.

Years before COVID-19 taught most of us how to differentiate N95s, cloths, and surgical masks, some groups already knew face coverings as an essential item. As a direct result of climate catastrophe in the 2010s, horrific wildfires have, year after year, turned the skies of the American West an apocalyptic orange. Newscasts covering these wildfires describe them as the effects of drought, but this is a misnomer; while "drought" is a persistent

condition of unusual dryness, these wildfires were symptomatic of something much more insidious: a new normal.¹ The increased insolation received by Earth's surface under its thickening greenhouse gas envelope has pushed climate zones away from the Earth's equator, and in the American West and the Australian East, that means deserts marching towards the poles—and trees stranded in climates they are not suited for.² Eventually, should warming cease, there will be an equilibrium: perhaps Southern California will look like Baja California once did, Northern California like Southern California, Washington like Oregon, and so on. But in the short run, if trees cannot tolerate the newfound dryness, they will burn. And while they burn, residents will be evacuated, or at the least, warned to stay inside, to avoid the soot.

But there, as ever, there is that key word: *residents*. The workers picking through the California fields in the photo above are, of course, not really “residents,” never mind how frequently they return to the same places, or how integral they are to the agricultural life of their communities. Since at least 2018, wildfires have made facemasks ubiquitous among these workers who continue to labor through the increasingly-long “fire season,” even to the point where the fires are literally in sight. For many of these workers, there are no other choices.³

¹ On the connection between wildfires and climate change, see A. Park Williams, John T. Abatzoglou, Alexander Gershunov, Janin Guzman-Morales, Daniel A. Bishop, Jennifer K. Balch, Dennis P. Lettenmaier, “Observed Impacts of Anthropogenic Climate Change on Wildfire in California,” *Earth's Future* 7, no. 8 (July 2019). On drought versus new normals, see William deBuys, *A Great Aridness: Climate Change and the Future of the American Southwest* (New York: Oxford University Press, 2011).

² David Archer, *Global Warming: Understanding the Forecast* (Chicago: University of Chicago Press, 2011).

³ Danielle Paquette, “During California Wildfires, Farmworkers Say They Felt Pressure to Keep Working or Lose Their Jobs,” *Washington Post*, 11/20/2018, https://www.washingtonpost.com/business/economy/during-california-wildfires-farm-workers-felt-pressured-to-keep-working-or-lose-their-jobs/2018/11/20/757f92a0-ec06-11e8-baac-2a674e91502b_story.html; see also Anna Maria Barry-Jester, “Latino Farmworkers Face Serious Health Risks Due to California's Wildfires,” *NBC News*, 10/31/2019, <https://www.nbcnews.com/news/latino/latino-farmworkers-face-serious-health-risks-due-california-s-wildfires-n1074691>.

Agricultural labor, in short, is still very much a disposable commodity. The type of intensive migrant hand labor that is common in California once predominated in Great Plains agriculture as well, but it is today largely replaced by combine harvesters. In Midwestern fruit belts and dairy operations, manual labor remains important, usually hidden away from the communities through which these migrants move. Among farmers I have talked to, rumors abound about employers who withhold passports to mistreat their workers under threat of deportation. The stories I heard appear to be well-founded, slivers of a systemic nation-wide mistreatment of the labor force—though abuse in the food system is hardly limited to migrant workers in this era.⁴ Still, the shape of this work is far different from the climate precarity that once saturated the Great Plains. Migrant workers are usually employed in crops where labor demand barely fluctuates with the environment at all, with heavy inputs of fossil fuels, fossil water, and fertilizers.⁵ Their exploitation is powered by economic and political factors, with the battle over “illegal immigration” and undocumented workers enabling their mistreatment; they do not bear the brunt of climatic unpredictability, but rather of chronically low-priced food and underregulation that refuses to touch the food system for fear of raising the price of milk.⁶

In this conclusion, I hope to explore the themes of the dissertation with an eye to the present and future. Practically speaking, the hobo has vanished. Moreover, modern migrant

⁴ Paul Harris, “Undocumented Workers’ Grim Reality: Speak Out on Abuse and Risk Deportation,” *The Guardian*, 3/28/2013, <https://www.theguardian.com/world/2013/mar/28/undocumented-migrants-worker-abuse-deportation>; see also Sally C. Moyce and Marc Schenker, “Migrant Workers and Their Occupational Health and Safety,” *Annual Review of Public Health* 39 (April 2018).

⁵ Economic Research Service, “Farm Labor,” *United States Department of Agriculture*, 4/22/2020, <https://www.ers.usda.gov/topics/farm-economy/farm-labor/>. Note the percentage of costs occupied by labor in fruit and nut tree, nursery and greenhouse, and vegetable and melon industries, all notoriously water-intensive crops.

⁶ On the food system’s underregulation, see Joshua Specht, *Red Meat Republic: A Hoof to Table History of How Beef Changed America* (Princeton, New Jersey: Princeton University Press, 2019), pp. 218-60.

exploitation clearly does not map onto climate precarity—the latter being a cocktail unique to places where manual labor is essential and the climate variable—and so it is important not to extrapolate the system described in this dissertation too far. But the story I tell in this project is carefully selected to illuminate some of the more surprising effects of climatic instability. This instability, I argue, is expected to be a major aspect of climate change in the twenty first century and beyond. Climate precarity, I argue, was a relatively unusual system in the past—but could become far more common in the future.

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How Energy Hides Climate, and New Migrations

Since 1930, climate and energy on the Great Plains remain tightly bound, with the latter hiding the effects of the former. Energy in the agricultural sector is now mostly consumed in the form of petroleum or electricity for on-field operations: electricity in big livestock operations, where it is used to light, heat, and motorize operations ranging from the incubation of chicken eggs to the butchering of slaughtered animals; petroleum to move tractors across cropland.⁷ In the arid High Plains, electricity is used to pump water from the Ogallala onto farm fields, with center-pivot irrigation systems carving lush circles into an otherwise barren landscape.⁸ Farther east, feedlots and slaughterhouses employ working class laborers who run the gamut from Mexican and Central American immigrant communities to poor whites who no longer work in farms or at local businesses and industries, with exhausting conditions, frequent accidents, and high turnover in the labor

⁷ Claudia Hitaj and Shellye Suttles, “Trends in U.S. Agriculture's Consumption and Production of Energy: Renewable Power, Shale Energy, and Cellulosic Biomass,” USDA Economic Information Bulletin, no. 159 (November 2016).

⁸ Opie, John. *Ogallala: Water for a Dry Land* (Lincoln, Nebraska: University of Nebraska Press, 2000 (orig. 1993)), pp. 116-81.

force.⁹ Wheat and maize cropland still occupies considerable territory across the Plains, but mostly in large-scale farms; sugar beet agriculture remains a major crop grown in rotation with others in its historical heartlands: the Red River Valley, Montana, and Colorado (among other areas)—these areas especially are heavily irrigated.¹⁰ Droughts rarely register in national headlines, even though the weather remains a chief concern of farmers—largely because the most arid regions are still guarded by fossil-fueled irrigation.¹¹

Reflecting this, productivity in Great Plains agriculture shows very little of the year-to-year variation it showed in the 1890s or even in the early twentieth century. Wheat yields have hardly budged in the last two decades, with severe drought conditions in Kansas in 2012 and 2013 having no discernable impact on yields or production of wheat in the state.¹² In several ways, this is even more remarkable than what farmers had achieved in the 1930s. While 1930s farmers had decoupled labor and climate, scaling inputs of fossil fuels to the climate-enabled yields they encountered, farmers today have been able to essentially ignore the climate, at least insofar as wheat, beef, and sugar on the Great Plains are concerned.

At the same time, the agricultural workforce has grown ever smaller.¹³ More processes are becoming automated in agriculture, possibly due to the increasing miniaturization of power that electricity has enabled above and beyond that of internal

⁹ Deborah Fink, *Cutting into the Meatpacking Line: Workers and Change in the Rural Midwest* (Chapel Hill, North Carolina: University of North Carolina Press, 1998).

¹⁰ Economic Research Service, “U.S. Sugar Production,” *United States Department of Agriculture*, 4/21/2021, <https://www.ers.usda.gov/topics/crops/sugar-sweeteners/background/>.

¹¹ Lois Wright Morton, Jean M. McGuire, and Alicia D. Cast, “A Good Farmer Pays Attention to the Weather,” *Climate Risk Management* 15 (2017): 18-31.

¹² USDA, “Crop Production: 2013 Summary,” *United States Department of Agriculture*, January 2014, <https://downloads.usda.library.cornell.edu/usda-esmis/files/k3569432s/qr46r290v/p5547v09z/CropProdSu-01-10-2014.pdf>; for drought statistics and coverage, see “Map Archive,” *U.S. Drought Monitor*, 2020, Accessed 6/10/2021, <https://droughtmonitor.unl.edu/Maps/MapArchive.aspx>.

¹³ Federal Reserve Bank of St. Louis, “Employment by Economic Activity: Agriculture: All Persons for the United States,” *FRED*, Accessed 6/10/2021, <https://fred.stlouisfed.org/series/LFEAAGTTUSM647N>.

combustion (electrical motors being more efficient and smaller), and electrical infrastructure has been built out farther into the countryside in the 1940s and 1950s.¹⁴ But if manual labor is an increasingly niche part of the agricultural sector, that certainly does not mean there are no migrant workers left on the Great Plains.

Instead, it is within the energy industry itself that the Great Plains sees some of its heaviest migrant work—particularly the building out of energy extraction infrastructure. Construction has remained an industry traditionally dominated by manual laborers, and the fracking boom of the Great Plains has required an enormous surge of these workers. As new technologies and relaxed regulations enabled the extraction of almost inconceivable quantities of oil in a very brief span, the oil production infrastructure of the Great Plains has grown at all levels. This process is at the very least politically contentious, from the mechanics of fracking (spurring environmental activism from residents) to the transport of oil and natural gas in unreliable new pipelines (leading to the famous Standing Rock Reservation protests against the Dakota Access Pipeline (DAPL)).¹⁵ But the surge in temporary jobs across North Dakota, Alberta, Oklahoma, and elsewhere has brought construction workers from far away.¹⁶

¹⁴ Hsin-Yi Chen, David A. Weisbach, Nathan J. Matteson, Alison Brizius, and Elisabeth J. Moyer, “A Physical Inventory of the U.S. Energy System: Supporting material for a manuscript in preparation for PNAS,” 3/3/2020, http://geosci.uchicago.edu/~moyer/Inventory/Chen_et_al_Energy_Inventory_2020.pdf.

¹⁵ On fracking, see Conevery Bolton Valencius, “Knowledge, Uncertainty, and Induced Earthquakes in Arkansas,” in “Forum: The Environmental History of Energy Transitions,” *Environmental History* 24, no. 3 (July 2019), pp. 463-533, <https://doi.org/10.1093/envhis/emz006>. On pipeline protests, see Nick Estes, *Our History Is the Future: Standing Rock Versus the Dakota Access Pipeline, and the Long Tradition of Indigenous Resistance* (New York: Verso Press, 2019).

¹⁶ Stories from this boom are captured, e.g., in J. J. Anselmi, “The Rise and Fall of a Fracking Boom Town: An Oral History,” *The New Republic*, 12/21/2020, <https://newrepublic.com/article/160689/rise-fall-fracking-boom-town-oral-history>.

But construction work is, again, a far cry from climate precarity. The most distinctive features of the hobo workforce were its constant movement and the vulnerability of its work (in multiple industries!) to disruption by climatic systems. Today, this is simply not a feature of either agriculture nor construction, either of which continue virtually unabated despite new droughts and storms in the 2010s and 2020s. A cautious interpretation of the evidence, then, suggests that climate precarity has historically only emerged in the narrow intersection of the era of coal and in areas of climatic instability.

Caution is indeed warranted, but I believe a cautious definition does not preclude using these methods to think about the historical intersections between energy, environment, and labor. Energy, in this dissertation, is broadly substitutable—it does not matter to the plow’s operation whether it is drawn by a horse or a human. But what provides energy becomes extremely important when we talk about work requiring dexterity (and thus requiring either finely machined engines or human hands)—or when we start to look at ecological considerations. Different environmental contexts, I argue, encourage the employment of animal, human, steam, or internal combustion and electrical power. And these power sources in turn can fundamentally reshape societies, as the transition from steam to internal combustion ended up reshaping Plains society. What, then, will be the result when the underlying environmental context changes everywhere—and very quickly?

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Variability Revisited, Past and Present

Variable climates—defined as those with unpredictable and erratic temperature or precipitation—have actually been quite rare in history. Strong ocean currents keep precipitation and temperature relatively consistent in marine west coast climates (like

Northwestern Europe) and the humid subtropics (like the American South or Southern China). Even in continental climates like the northeastern United States or Eastern Europe, year-to-year variation only occasionally led to failed crops, as the worst droughts almost never saw rainfall below the totals required for grain crops like maize or wheat, or root crops like potatoes.¹⁷ Even the best climate histories often find the evidence for disasters on the scale of years to be highly ambiguous, and the overall social and economic effects of large scale shifts like the Little Ice Age are, at best, hotly contested.¹⁸ Most places, most of the time, natural climatic variability's effects are quite subtle. The Great Plains, like other grasslands regions around the world, were historically quite different: all of them were both unpredictable and displayed variation that would be catastrophic for sedentary agriculture, destroying crops on a massive scale. This difference gave grasslands ecosystems distinct social and economic systems. It made them virtually unconquerable by the sedentary empires of the ancient, medieval, and early modern periods—and consequently, almost unique in their political and economic histories.¹⁹

But this combination of variability and the impact of that variability will, soon, be quite general. The world will not merely grow hotter but more variable over the next few decades. In the Great Plains, this will almost certainly manifest as larger storms, fierce winds, and increased (and strongly seasonal) rain. Across the middle of North America, storms and

¹⁷ Howard Critchfield, *General Climatology* (Englewood Cliffs, New Jersey: Prentice Hall, 1966), pp. 178-206. Note that annual rainfall in these areas is far, far above the 20 inches needed for wheat agriculture.

¹⁸ Dagomar Degroot, Kevin Anchukaitis, Martin Bauch, Jakob Burnham, Fred Carnegy, Jianxin Cui, Kathryn de Luna, Piotr Guzowski, George Hambrecht, Heli Huhtamaa, Adam Izdebski, Katrin Kleemann, Emma Moesswilde, Naresh Neupane, Timothy Newfield, Qing Pei, Elena Xoplaki, Natale Zappia, "Towards a rigorous understanding of societal responses to climate change," *Nature* 591, no. 7851 (March 2021).

¹⁹ On grasslands regions' resiliency in the face of empire, see Christopher Beckwith, *Empires of the Silk Road: A History of Central Eurasia from the Bronze Age to the Present* (Princeton, New Jersey: Princeton University Press, 2009).

rain are likely. The droughts of yesteryear may well be a rarity. Worldwide, storms, droughts, and strong year-to-year unpredictability will become the norm. The Great Plains of the nineteenth century was unusually dry, but it may provide a window into how it would feel to live in a climate that simply could not be planned for.²⁰

Still, does that history matter? If farmers solved the energy and aridity crisis of climate with fossil fuels before, might that become a worldwide trend? The key to the transition between what I have termed the first and second western work regimes was that energy could neatly substitute for human work. Combines took the place of harvest hands; trucks took the place of freighters. Fossil fuels could scale up and neatly, easily, replace human hands. This makes grain agriculture an unlikely candidate for a revival of climate precarity. Modern-day climate precarity might instead emerge somewhere where the climate is capricious, where the political economy is capitalist, where work done by hand cannot be done by machines, and in work where material throughputs are climatically dependent. Let us briefly examine each of these in turn.

First: where will the climate be variable? As we covered above, this will likely apply to increasingly large parts of the Earth. However, certain areas are likely to see more substantial impacts: desertifying regions (from wildfires and droughts), coastal areas (from sea level rise and cyclones), and areas where crop yields are likely to drop (from all of the

²⁰ O. Hoegh-Guldberg, D. Jacob, M. Taylor, M. Bindi, S. Brown, I. Camilloni, A. Diedhiou, R. Djalante, K.L. Ebi, F. Engelbrecht, J. Guiot, Y. Hijikata, S. Mehrotra, A. Payne, S. I. Seneviratne, A. Thomas, R. Warren, and G. Zhou, *Impacts of 1.5°C Global Warming on Natural and Human Systems*. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*, 2018, https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Chapter3_Low_Res.pdf, especially p. 178 on effects on precipitation in North America.

above). Tropical areas are likely to be most affected by these latter impacts, but emigration means the effects will ripple outwards to other, more northern and southern latitudes.²¹

Second: where will the political economy be capitalist? It is tempting to conclude that this is, effectively, everywhere, especially as the largest command-style economies (especially but not limited to China) have mostly undergone substantial reforms to implement free financial markets, but keep in mind that a narrowly construed vision of climate precarity assumes that workers are utterly dependent on their unpredictable jobs for survival through a year. This requires a poor or incomplete social safety net, such that basic expenses (food, shelter, healthcare) are not guaranteed by the state. Thus far, these criteria have hardly narrowed our search—though some regions have more climatic vulnerability (the Global South) and some have less protection for workers (the United States), many different places and peoples are vulnerable. This is less the case with the next two factors.

Third: where can work done by hand not be replaced by machines? Technology makes this question difficult to answer, as automation has only developed inconsistently over time. Hand labor is still integral in various extractive industries—agriculture, mining in undercapitalized operations—and in the service sector or fulfillment.²² Most importantly, I think, automation as an answer to environmental pressures historically took *time*—while our society has many capabilities that nineteenth century America lacked, it is worth

²¹ Hoegh-Gulberg et al., *Impacts of 1.5°C*, especially pp. 244-5.

²² On manual labor in fulfillment, and the abuses seen therein, Jodi Kantor, Karen Weise and Grace Ashford, “The Amazon That Customers Don’t See,” *New York Times*, June 15, 2021, <https://www.nytimes.com/interactive/2021/06/15/us/amazon-workers.html>.

remembering that attempts to innovate away the workforce in grain agriculture took the better part of 50 years.

Fourth: where are material throughputs climatically dependent? Obviously, agriculture remains tied to the climate, even if we have mostly covered that up with energy intensity. While water and biomass are usually taken care of by fossil-fueled agriculture, other climatic factors—like insolation (the amount of sunlight a crop receives)—are still out of human control. Agriculture and other extractive industries might be still more vulnerable to threads like heat or cold so extreme that humans and machines begin to break down.²³ Care, service, and manufacturing work might be less susceptible to these trends, being not directly materially connected to environmental conditions, although it is possible that in regions where the wider economy *is* extractive and therefore heavily tied to environmental conditions, the rest will come crashing down with it.

The bottom line is that, although much has changed since the nineteenth century—and although climatic variability might be historically unusual—the story of climate precarity is quite possibly the story of our future as well. Assuming these four factors coincide, regional economies will need to be predicated on the movement of people as well as things—movement that is unlikely to be closely regulated, supported, or guaranteed by state actors. It is in these moments that migration becomes another—particularly potent—tool for human exploitation.

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A few years into the research for this dissertation, I found myself navigating downtown Chicago, trying to replace a lost Social Security card. I remember parking by the

²³ on extreme heat, Hoegh-Gulberg et al., *Impacts of 1.5°C*, especially pp. 240-1.

massive glass tower, looking up at the street sign, and getting stopped in my tracks. These streets—the intersection of Des Plaines and Madison in the West Loop—were familiar, even though I’d never been there before in my life. They were the same streets that appeared on Nels Anderson’s map of Chicago’s hobohemia. Right on the intersection once stood a saloon with a secret gambling hall upstairs. Next to it had been a Christian mission, cheap restaurants, a barber college, flophouses, and employment agencies. Now, it was a massive federal building, its boundary protected by bollards and a concrete wall. Down the street—on what had once been hobohemia’s main stem—was I-90, and Chicago’s downtown rail yards. A few hundred feet away stood the Willis Tower, commingled with Asian-American grocery stores.²⁴

Little remains of hobo life in our cities, towns, or country. The remnants of jungles, never meant to be anything more than temporary, have settled into the soils, the tin cans used for cooking mulligan stew likely indistinguishable from the endless detritus of industrial society more generally. Cheap housing and tenements in the city have long since been bulldozed or repurposed. In Chicago’s downtown, the West Loop is now quickly gentrifying, with the city’s hottest restaurants strewn along Randolph Street. Certainly, parts of the city’s history are built into its landscapes: Randolph owes its width to the streetcar line that once ran along it; city planners funneled the interstate through the area because it was still, in the 1960s, the poorest section of the Loop.²⁵ One could say the same of the long, ruler-straight gridlines of Western farms, still carved into vast squares that reject

²⁴ For this map, see Nels Anderson, *On Hobos and Homelessness* (Chicago: University of Chicago Press, 1998), p. 40.

²⁵ Robert Loerzel, “When the Eisenhower Expressway Moved in, Who Was Forced Out?” *WBEZ Chicago*, n.d., Accessed 6/16/2021, <https://interactive.wbez.org/curiouscity/eisenhower/>.

topography, even as farmers have begun to contour farm, or the railroad towns the hobos built that became highway towns as the twentieth century marched along. It is hard to see in the shape of the land any individual human efforts. There is only the aggregate.

At the same time that the history of hobos seems ever more distant, the modern world is—quite literally—on fire. While I wrote this dissertation, I considered many endings lifted from then-current events: the massive floods that devastated Midwestern farmers, the multiple polar vortices that brought Arctic air far south of its normal ambit, and the devastating 2019 derecho windstorm that blasted the Corn Belt with the force of hurricane winds (one which my car’s windshield narrowly avoided).²⁶ These events are but a tiny slice of the global acceleration in the frequency and severity of extreme weather. Anthropogenic climate change is almost certain to raise global temperatures by at least 2°C above preindustrial norms. Even if we limit greenhouse gas emissions sufficiently to meet this target—hardly a sure thing—the world that we are creating will look very unfamiliar. The next few decades are almost certain to bring mass migration and a refugee crisis on a scale previously unimaginable.

Why, then, should we consider the hobo—a group 70 years dead and 100 years from relevance?

Hobos are relevant, I think, both for what they say about the longer arc of history, and for the story they tell us of the world that we might soon inhabit. The former, we explored in detail in the Introduction: the history of hobos suggests a reinterpretation of the relationship

²⁶ For more on these events, see on floods, Samantha Harrington, “Did Climate Change Cause Midwest Flooding?” *Yale Climate Connections*, April 2, 2019, <https://yaleclimateconnections.org/2019/04/did-climate-change-cause-midwest-flooding/>; on the polar vortex, “What Is the Polar Vortex?” *UCDavis*, Accessed 6/16/2021, <https://climatechange.ucdavis.edu/climate-change-definitions/what-is-the-polar-vortex/>, on the derecho: Sukee Bennett, “Inside the Derecho that Pummeled the Midwest,” *PBS*, August 21, 2020, <https://www.pbs.org/wgbh/nova/article/derecho-wind-storm-iowa/>.

between labor and energy; it suggests that the age of steam and muscle carried with it a certain set of labor relations that were particularly unsuited to inclement climates; that historical transitions in energy and in labor parallel one another—perhaps even engender one another. It is true that the particularities of the hobo work regime do not map precisely onto modern societies. But their lives are still compelling, for the simple reason that our material world might look very different—and very close to theirs—very soon.

Climate catastrophe compels us to change the way we live with the world. Simply put, we must restructure the way we use energy, whether to avert climate change or to live with its effects—and consequently, restructure labor as well. But those changes are not predetermined. They need bring neither exploitation nor precarity. The story of hobos shows us that the interaction of energy and climate can change labor relations—but that this interaction is heavily mediated by the economic, legal, and sociocultural landscapes we choose to build. Climate precarity is inevitable only insofar as we both fail to avert climate catastrophe *and* fail to provide safeguards for the livelihoods of those working within it. Precarity, in other words, is a choice we make; it is a thing we build into the landscape. Like the hobo, our most lasting legacy will be the world we build.

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- Big Blue Union*, Marysville, KS
- Big Stone City Herald*, Big Stone City, SD
- Bismarck Weekly Tribune*, Bismarck, ND
- Black Hills Union*, Rapid City, SD
- Bon Homme County Independent*, Tabor, SD
- Bottineau Courant*, Bottineau, ND
- Bowbells Tribune*, Bowbells, ND
- Brookings Register*, Brookings, SD
- Canton Advocate*, Canton, SD
- Capital City Courier*, Lincoln, NE
- Cavalier County Farmers' Press*, Langdon, ND
- Chanute Times*, Chanute, KS
- Cheyenne Transporter*, Darlington, OK
- Chickasha Daily Express*, Chickasha, OK
- Columbus Journal*, Columbus, NE
- Cooperstown Courier*, Cooperstown, ND
- Courier Democrat*, Langdon, ND
- Custer County Republican*, Broken Bow, NE
- Custer Weekly Chronicle*, Custer City, SD
- Daily Ardmorite*, Ardmore, OK
- Daily Chieftain*, Vinita, OK
- Dakota County Herald*, Dakota City, NE
- Dakota Farmers' Leader*, Canton, SD
- Devil's Lake Inter Ocean*, Devil's Lake, ND
- Dewey County Advocate*, Timber Lake, SD
- Dickinson Press*, Dickinson, ND
- Dodge City Globe Republican*, Dodge City, KS
- Dodge City Times*, Dodge City, KS
- Durant Weekly News*, Durant, OK
- Emmons County Record*, Williamsport, ND
- Emporia News*, Emporia, KS
- Falls City Tribune*, Falls City, NE
- Fargo Forum*, Fargo, ND
- Farmers' Champion*, Elgin, OK
- Forest City Press*, Forest City, SD
- Forum*
- Dakota Chief*, Gann Valley, SD
- Golden Valley Chronicle*, Beach, ND
- Goodland Republic*, Goodland, KS
- Grand Forks Evening Times*, Grand Forks, ND
- Griggs Courier*, Griggs, ND
- Guthrie Daily Leader*, Guthrie, OK
- Hays Free Press*, Hays, KS
- Hobo News*
- Hope Pioneer*, Hope, ND
- Hot Springs Weekly Star*, Hot Springs, SD
- Hutchinson Gazette*, Hutchinson, KS
- Indian Chieftain*, Vinita, OK
- Iola Register*, Iola, KS
- Jamestown Weekly Alert*, Jamestown, ND
- Kadoka Press*, Kadoka, SD
- Kansas Agitator*, Garnett, KS
- Kansas Herald of Freedom*, Wakarusa, KS
- Kansas News*, Topeka, KS
- Kimball Graphic*, Kimball, SD
- Kingsbury County Independent*, De Smet, SD
- Kinsley Graphic*, Kinsley, KS
- Leavenworth Weekly Times*, Leavenworth, KS
- Lemmon Herald*, Lemmon, SD
- Liberal Democrat*, Liberal, KS

Lincoln Alliance, Lincoln, NE
Lincoln Commoner, Lincoln, NE
Lincoln County Tribune, North Platte, NE
Lincoln Courier, Lincoln, NE
Lincoln Farmers' Alliance, Lincoln, NE
Lincoln Wageworker, Lincoln, NE
Loup City Northwestern, Loup City, NE
Madison Daily Leader, Madison, SD
McCook Weekly Tribune, McCook, NE
Meade County News, Meade, KS
Mellette County Pioneer, Wood, SD
Milbank Herald Advance, Milbank, SD
Miller Press, Miller, SD
Mitchell Capital, Mitchell, SD
Mobridge News, Mobridge, SD
Muskogee Cimeter, Muskogee, OK
Nebraska Advertiser, Brownville and Nemaha, NE
Nebraska Independent, Lincoln, NE
Newell Reclamation News, Newell, SD
Nonpartisan Leader, Fargo, ND
Norfolk Weekly News, Norfolk, NE
North Platte Semi-Weekly, North Platte, NE
Oakes Weekly Republican, Oakes, ND
Oklahoma City Times, Oklahoma City, OK
Oklahoma Miner, Krebs, OK
Omaha American, Omaha, NE
Omaha Daily Bee, Omaha, NE
One Big Union Monthly
People's Voice, Wellington, KS
Philip Weekly Review, Philip, SD
Phillipsburg Herald, Phillipsburg, KS
Pierre Weekly Free Press, Pierre, SD
Pioneer Express, Pembina, ND

Press and Daily Dakotaian, Yankton, SD
Red Cloud Chief, Red Cloud, NE
Saline County Journal, Salina, KS
Scotland Citizen Republican, Scotland, SD
Sioux County Journal, Harrison, NE
Sioux County Pioneer, Fort Yates, ND
Sisseton Weekly Standard, Sisseton, SD
Smoky Hill and Republican Union, Junction City, KS
State Line Herald, North Lemmon, ND
Sturgis Advertiser, Sturgis, SD
Sully County Watchman, Clifton, SD
Thomas County Catalogue, Colby, KS
Topeka State Journal, Topeka, KS
Tulsa Daily World, Tulsa, OK
Tulsa Star, Tulsa, OK
Turner County Herald, Hurley, SD
Union County Courier, Elk Point, SD
Valentine Democrat, Valentine, NE
Wagner New Era-Leader, Wagner, SD
Wahpeton Times, Wahpeton, ND
Ward County Independent, Minot, ND
Warner Sun, Warner, SD
Washburn Leader, Washburn, ND
Watertown Saturday News, Waterton, SD
Weekly Kansas Chief, Troy, KS
Weekly Times-Record, Valley City, ND
Wessington Springs Herald, Wessington Springs, SD
Western Kansas World, WaKeeney, KS
White Cloud Kansas Chief, White Cloud, KS
Wichita City Eagle, Wichita, KS
Will Maupin's Weekly, Lincoln, NE
Williston Graphic, Williston, ND

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