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ROAD POWER: THE POLITICS OF AMERICAN HIGHWAY DEVELOPMENT,
1900-1939

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DEPARTMENT OF HISTORY

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List of Abbreviations

- AASHO** / American Association of Highway Officials
ASTM / American Society for Testing Materials
BPR / Bureau of Public Roads
CCC / Civilian Conservation Corps
CWA / Civil Works Administration
ERCA / Emergency Relief and Construction Act
FERA / Federal Emergency Relief Administration
FWP / Federal Writers Project
IAH / Inter-American Highway
IRC / International Road Congress
NCSHS / National Conference on Street and Highway Safety
NIRA / National Industrial Recovery Act
NRA / National Recovery Administration
OPR / Office of Public Roads
OPRRE / Office of Public Roads and Rural Engineering
ORI / Office of Road Inquiry
PAH / Pan-American Highway
PAHC / Pan-American Highway Congress
PWA / Public Works Administration
RFC / Reconstruction Finance Corporation
USDA / United States Department of Agriculture
WPA / Works Progress Administration

Abstract

Road Power uses the development of the American highway system to examine the foundations of the federal state. This thesis argues that the highway bureaucracy accrued power throughout the early twentieth century, providing a historical narrative that seamlessly connects the long Progressive Era with the New Deal through an increasingly powerful national state. *Road Power* uncovers the multi-faceted approach to state development and the federalization of infrastructure development.

The story begins with the institutional components of standardization and oversight, arguing that the federal aid highway legislation, implemented by managerial professional experts, created a national highway authority that marshalled a standardized road program. Following this institutional change, *Road Power* determines that the highway program fed into notions of American exceptionalism. Both the rhetoric of exceptionalism justifying good roads and the use of roads for foreign economic and policy intervention show how roads assuaged popular anxieties in the early twentieth century. The convict laborers who built the roads underscore the ways in which states ceded labor oversight and control to national directives and campaigns. By connecting convict labor, penal reform, and the national road programs, this study finds a shift from state to federal control that manifested in the roots of the penal state through oversight, regulations, and experimentation. The study closes with the New Deal state, arguing that roads were the dominant political and cultural symbol of the era. The subject of roads offers an analytical tool that frames the road building program of the early twentieth century as a template for the government-directed public works programs of the New Deal's liberal democracy.

Introduction: “Without Which This Country Could Not Exist”

At the turn of the twentieth century, the automobile transformed America. The automobile offers a window into much about the early twentieth century: how society was structured, the changes in production and labor patterns, new ideals of consumerism and path dependence, the rise of environmental and wilderness movements, and the understanding of tourism and regionalism, among other topics. Scholars and auto enthusiasts alike have illuminated the special relationship between Americans and their cars, and we now are gaining a more holistic understanding of both the lore and the impact of the auto in America. The car, though, did not transform America alone. Without roads, cars would be rendered virtually ineffective. As automobiles restructured Americans’ lives, highways redrew the national map and reconstituted the American state.

Historians sociologists, economists, and geographers have examined how the car reorganized individual and collective behavior in the twentieth century, with one scholar defining the automobile simultaneously as both the “great glor[y] of the modern age” and the “scourge of civilization.”¹ By affecting urban planning and zoning, the car changed how Americans conceived of time and space. By bringing Americans closer to the wilderness, cars inaugurated the nation’s first nature movement and inspired a comprehensive plan for local parks for all citizens. By connecting the nation, the car cemented unique regional identities and cultures while promoting national tourism. By changing American manufacturing, advertising, and purchasing, the car fostered a new

¹ Brian Ladd, *Autophobia: Love and Hate in the Automotive Age* (Chicago: University of Chicago Press, 2008), 1.

industrial economic system including a transformed role of consumerism.² The car—culturally, socially, and economically—changed America, and this change affected a broad swath of Americans. Only 8,000 cars were registered in 1900, yet by 1912 that number skyrocketed to 944,000, breaking 10 million in 1921 and reached a stunning 20 million in 1925 and 30 million in 1937.³ This revolution changed more than people's relationship with space, material products, and the environment. The turn of the twentieth century fundamentally redrew the map of America. With the proliferation of automobiles, the national map thereafter included highways.

To contextualize the effects of the automobile, we must understand the highways. By studying the highway system and how it grew, we gain insight into the reorganization of the government, society, labor, and the environment during the early twentieth century. As automobile historians often discuss the highways in passing reference, the topic remains understudied, yet it is vitally important to understanding state development in the early twentieth century. The highways changed the nation's

² Christopher Wells, *Car Country: An Environmental History* (Seattle: University of Washington Press, 2012); Paul Sutter, *Driven Wild: How the Fight Against Automobiles Launched the Modern Wilderness Movement* (Seattle: University of Washington Press, 2002); William E. O'Brien, *Landscapes of Exclusion: State Parks and Jim Crow in the American South* (Amherst and Boston: University of Massachusetts Press, 2016); Marguerite S. Shaffer, *See America First: Tourism and National Identity, 1880-1940* (Washington, D.C.: Smithsonian Institution Press, 2001); Hal Rothman, *Devil's Bargain: Tourism in the Twentieth-Century American West* (Lawrence: University Press of Kansas, 1998); John A. Jakle, *The Tourist: Travel in Twentieth-Century North America* (Lincoln: University of Nebraska Press, 1985); Anne Hyde, *An American Vision: Far Western Landscape and National Culture, 1820-1920* (New York: New York University Press, 1990); David Wrobel, *Global West, American Frontier: Travel, Empire, and Exceptionalism from Manifest Destiny to the Great Depression* (Albuquerque: University of New Mexico Press, 2013); Jackson Lears, *Fables of Abundance: A Cultural History of Advertising in America* (New York: Basic Books, 1994); John A. Jakle and Keith A. Sculle, *Motoring: The Highway Experience in America* (Athens, GA: University of Georgia Press, 2008); Douglas Brinkley, *Wheels for the World: Henry Ford, His Company, and a Century of Progress, 1903-2003*; David Ekbladh, *The Great American Mission: Modernization and the Construction of an American World Order* (Princeton, NJ: Princeton University Press, 2010).

³ United States Department of Transportation—Federal Highway Administration, *Highway Statistics 1984*, pp. 50, available at: <https://rosap.ntl.bts.gov/view/dot/8338> cfm accessed December 6, 2017.



Figure 0.1: As the automobile became more powerful and widespread in the early twentieth century, America's roads needed improvement. The U.S. government re-drew America's map, developing improved roads across the nation. Source: NARA-II 30-R-NC-11449.

landscape and its citizenry's lifeways. To see the national highway system, constructed and managed by a federal highway bureaucracy, as somehow predestined, ignores the tumult and negotiation that marked the nation's transformation. The federalization of roads was not inevitable; the process represents a shift in American political and social history and drives *Road Power*.

The most comprehensive examination of the development of the highway system is Bruce E. Seely's masterful *Building the American Highway System* (1987).⁴ Seely convincingly argues that American engineers asserted themselves as policy makers through the twentieth century, guiding the future of the system. While the work touches on themes of politics and experts, Seely leaves out a broader landscape of the period's context and social implications. Recently, I.B. Holley's *The Highway*

⁴ Bruce E. Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987).

Revolution, 1895-1925 (2008) delves into the engineering mechanics and the technological and scientific developments of how the highways were built.⁵ Like Seely, Holly does not place the building of the highway in its full political, intellectual, and cultural contexts. This thesis, then, attempts to build on Seely, Holley, and the scholars of early twentieth century automobile culture by tying together various layers of highway history. The economy of highways touched and affected politics, culture, society, law, and race. The highway transversed the nation, touching every region and affecting every person. The highway system both reflected the ideals of the early twentieth century and catalyzed new modes of thought and social structure. Maps defined motorists' relationship with their surroundings, and the highways on the maps created new conceptions of American space and governance.

Scholars have studied individual highways to uncover the local cultural and political ramifications of these roads. Tammy Ingram, for instance, places the Dixie Highway in the context of a modernizing South, delving into how the federal-regional-state relationship affected local political struggles, regional identity, and labor practices.⁶ Similarly, Lyell D. Henry uncovers how the Jefferson Highway forged a new method of interstate political interactions and touristic identities.⁷ Beyond these two excellent, yet narrowly focused studies, John Jakle provides an overview of the hundreds of named highways in the early years of road building.⁸ While his history

⁵ I.B. Holley, Jr., *The Highway Revolution: 1895-1925: How the United States Got Out of the Mud* (Durham, NC: Carolina Academic Press, 2008).

⁶ Tammy Ingram, *Dixie Highway: Road Building and the Making of the Modern South, 1900-1930* (Chapel Hill: University of North Carolina Press, 2014).

⁷ Lyell D. Henry, *The Jefferson Highway: Blazing the Way from Winnipeg to New Orleans* (Iowa City: University of Iowa Press, 2016).

⁸ John A. Jakle, "Pioneer Roads: America's Early Twentieth-Century Named Highways," *Material Culture* 32, no. 2 (2000): 1-22.

uncovers the power of the name in embedding cultural meaning into the landscape, Jakle does not focus on the greater cultural and political context of and reaction to the naming practices. This thesis examines the highway system in its political and cultural context to illuminate American state development.

As a federal project with national scope and implications, the highways touched everyone. Highway advocates and boosters did not overlook the effects of their projects. In 1927, one United States Senator opined: “I am positive that all thinking people of the United States agree that had we enjoyed the highways and motor cars we have today, and the friendships created by personal individual contacts by tourists and visiting parties now so conveniently moving about, in a like manner in 1860, that there never would have been a war in the United States.”⁹ Overlooking the fact that the Civil War concerned slavery, Senator Ralph Cameron spoke for a large swath of Americans when he extrapolated the comprehensive effects of a nation united by roads.

Such unification began with failure in the 1890s. When states failed to improve roads and create a coherent system, the federal government acted. By answering the call for a centralized consolidated power, the national state expanded its purview. In the first decades of the twentieth century, the federal authorities invested in roads, and the data speaks for itself. When the United States Congress first authorized a financial appropriation to build roads in 1917, it expended \$6 million dollars. In 1921, that expenditure ballooned to over \$100 million. A decade later, the federal government spent over \$230 million on roads, and the numbers in the next few years revealed a sustained investment: \$455 million (1934), \$219 million (1935), and \$580 million

⁹ Correspondence from Ralph H. Cameron to Henry Ford, Accession 6, Box 37, folder “General Correspondence 1924—C(1 of 3),” Benson Ford Research Center, Dearborn, MI.

(1936).¹⁰ The investment alone shows the centrality of road building to the national American state, growing from approximately one-half of one percent of the total U.S. budget in 1917 to nearly two percent in 1921 and over seven percent in 1931.¹¹

This investment returned dividends. The U.S. government began aggregating data in the 1920s, which underscored the extent to which the American landscape reflected the new car culture in which urban and rural space was constructed to reflect Americans' reliance on cars.¹² The cumulative road mileage in the U.S. shows an amazing trajectory of growth in the early twentieth century: from under 2.4 million miles in 1904 to over 3.1 million miles in 1921.¹³ After the federal aid highway acts of the 1920s, the national highway authority designated some of the three million road miles as part of the federal aid system. This system grew as it was improved, and this data, too, shows a remarkable pace of development. In 1925, just under 275,000 miles constituted the U.S. federal aid systems, of which less than half was surfaced. In 1930, approximately 325,000 miles existed in the United states with nearly 70 percent surfaced. Five years later, the United States map included almost 525,000 miles of road with over 70 percent of that mileage surfaced.¹⁴ The highways defined where motorists could go and at what speed. As the car technology led the highway system, the highways

¹⁰ United States Department of Transportation—Federal Highway Administration, *Highway Statistics 1984*, Table FA-200, pp. 140, available at: <https://rosap.ntl.bts.gov/view/dot/8338> accessed December 6, 2017.

¹¹ United States White House, *Introduction to the Historical Tables: Structure, Coverage, and Concepts*, Table 1.1—Summary of Receipts, Outlays, and Surpluses or Deficits:1789-2022, pp. 24, available at: <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/hist.pdf> accessed May 2, 2018.

¹² Wells, *Car Country*, 125-171.

¹³ United States Department of Transportation—Federal Highway Administration, *Highway Statistics 1984*, Table M-200, pp. 197, available at: <https://rosap.ntl.bts.gov/view/dot/8338> accessed December 6, 2017.

¹⁴ United States Department of Transportation—Federal Highway Administration, *Highway Statistics 1984*, Table SM-200, pp. 243, available at: <https://rosap.ntl.bts.gov/view/dot/8338> accessed December 6, 2017.

reflected the motorists' needs and desires. American car production and ownership, though, led the world, so American highway engineers faced the challenge of imagining, articulating, and building a new infrastructural system.

The first four decades of the twentieth century mark the most crucial period in America's highway construction. Although President Eisenhower famously signed the Interstate Highway Act in 1956, the model of federal-state cooperation had long been implemented. Between 1893 and 1916, national and state governments experimented with new models of power sharing. Through this period, citizens and their local elected officials increasingly called on the national government to organize a singular effort to design, test, plan, and lay out the nation's highways.

The federal government built America's highway system, and in doing so built itself. Between 1916 and the Great Depression (1929), the federal and state governments determined an effective working balance in which decision-making, scientific inquiry, and project oversight rested with the national highway bureaucracy. While still functioning under political constraints, the highway bureaucracy—and its cadre of engineers, inspectors, boosters, and managers—led the American highway project. They established a distinct model that helped inform what President Franklin Roosevelt used for many of his New Deal programs. During the New Deal era (1933 to 1939), the American highway bureaucracy served as a model to contemporaneous federally-initiated projects and programs. During this period, labor practices changed and federal oversight refined road building practices.

Studying America's infrastructural development challenges ideas of state development and a federalist balance by examining who wielded what kind of power

when. Themes of power, then, organize this story. Just as power—as seen in finance, information, law, rhetoric, and foreign intervention—underlay all highway projects, it organizes the layout of this study of the highways.

These two intertwined concepts of the state and power need clear definition to succeed as the foundational analytical themes of *Road Power*. Building on Max Weber's definition of the state as a coercive institution that acts through its administrative and legal capacities to structure relationships among society, Theda Skocpol articulates two forms of the state: first, "organizations through which official collectivities may pursue distinctive goals"; second, "configurations of organization and action that influence the meanings and methods of politics for all groups and classes in society."¹⁵ The main difference in Skocpol's articulations of the state lay in the origins of power: through authoritative officials or through consensus by interested parties and groups. The state, as seen through its highway program, blends Skocpol's two forms, for they are not mutually exclusive but are both able to reinforce one another to legitimate the institutional authority that structures and orders society.

The state must be understood as an active institution that works and gains power through legal, financial, and informational power structures, and it is comprised of sometimes competing yet ultimately coalescing engineers, politicians, and interest groups. In the transition to the modern state, James C. Scott finds administrative statecraft employed through "high-modernist ideology," which he defines by the authority's faith in its program "about scientific and technical progress, the expansion

¹⁵ Theda Skocpol, "Bringing the State Back In: Strategies of Analysis in Current Research," in *Bringing the State Back In*, ed. Peter B. Evans, Dietrich Rueschemeyer, and Theda Skocpol (Cambridge: Cambridge University Press, 1985), 7-8 and 27-28.

of production, the growing satisfaction of human needs, the mastery of nature (including human nature), and, above all, the rational design of social order commensurate with the scientific understanding of natural laws.”¹⁶ Scott’s state uses simplification, abstraction, and administration to impose an order that reifies a powerful centralized bureaucratic authority. The highway bureaucracy follows Scott’s model of modern statecraft through, what I differentiate as, two forms of power that operate on a continuum: soft power and hard power, both of which ultimately contribute to achieving Scott’s model of simplification, abstraction, and administration. Soft power is based on the accumulation and distribution of information. This power comes without legal or financial aid, but through the state fostering organic support for its program by virtue of it being an information clearinghouse. Hard power, the successor and complement to soft power, is based in both legal and financial authority. When the state incentivizes or mandates its program, it exercises hard power. The modern active state that exercised both hard and soft power to centralize authority is epitomized by the highway’s development, and that argument structures this narrative.

The first two chapters look at policy and institutional change, taking the reader through the American state building process. Chapter One looks at the growth of the Bureau of Public Roads, beginning as an informational clearinghouse in 1893, with a mere \$10,000 in funding, to the behemoth highway bureaucracy controlling hundreds of millions of dollars. Most importantly, the chapter studies a fundamental shift in the balance of American power, from local and state entities to the national government.

¹⁶James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998), 4.

This shift manifests, for example, in a shift in a broad constitutional interpretation that grants the national government the responsibility of building highways. This power grew, I argue, because states and localities called on the government to help organize an effective national program.

Chapter Two turns to that national program—how it was built and what it looked like. The chapter focuses on the role of the expert engineer as an esteemed public servant. The engineer's ability and training fostered public support for his work, which allowed him to operate without significant political and public oversight and scrutiny. The engineer, in turn, standardized the road system around the nation. By mandating material standards, building standards, and safety laws and functions, the federal government grew its power in response to public needs.

Chapters Three and Four turn to the cultural and intellectual context in which American highways developed, tracing the historical justification and the consequences of this program. Chapter Three looks at the power of rhetoric in boosting highway development. This rhetoric fed into ideals of American exceptionalism. I argue that Americans used the highways to assuage post-frontier, post-WWI anxieties. By comparing American highways to those of Rome and other dominant empires throughout history, American highway advocates asserted their physical permanent legacy. Similarly, notions of American exceptionalism characterized the way that American highway engineers operated globally, both in direct comparisons of road programs and in transnational information exchanges. Lastly, highway advocates argued that national strength was measured in military might, and good roads were fundamental to a strong country. By invoking American exceptionalism, American

highway advocates reflected and echoed the intellectual currency of the early twentieth century.

Chapter Four turns to the rhetoric of exceptionalism and imperialism beyond American borders. By looking into the American discourse surrounding the Pan-American Highway, an American-led highway project through 19 Latin American countries, we find new articulations of American technocratic exceptionalism. This case study also reveals new ways in which foreign utilitarian intervention programs boosted American economic and political goals. Following the highway's goal of hemispheric dominance through economic development and technocratic exceptionalism, this infrastructural form of foreign nation building laid the groundwork for subsequent American foreign policy initiatives.

Chapter Five turns to the laborers who toiled on the roads in America, mostly convicts. Comparing national convict labor programs reveals how labor programs used the Thirteenth Amendment's criminal exemption clause to ensure a docile labor force. Contrasting the two different forms of convict labor, the honor and guard systems, reveals how national penology was implemented and modified to fit local needs. The chapter concludes with a discussion of the political end to public convict road labor, which came due to the ire of organized labor at the onset of the Great Depression. The organized laborers forced penologists to re-conceptualize prison labor programs and shift them out of the public gaze.

After public convict road labor ended in the early 1930s, we turn to the culmination of America's road building power in the Conclusion. *Road Power* concludes by examining the New Deal, which represented the zenith of America's

public works projects and federal infrastructure. With a four-decade precedent of a hierarchical, centralized bureaucracy, the New Deal shows a new scale and scope in responding to the needs of its citizenry and ameliorating the consequences of an economic catastrophe. The section concludes with another New Deal program that relied on the highways, the Federal Writers' Project. Looking at the *American Guide* series, this section illuminates the way that the highways symbolically came to define the nation—culturally and historically.

Road Power flips the historical script by looking at the infrastructural revolution that allowed car culture to dominate the twentieth century. The highway and roads literally reshaped the American landscape during this period, yet they reveal much more than a new map. They reflect new American values and new conceptions of the role of the state. By reorganizing space, the highways inherently reified the state's authority. This highway history allows us to reflect on the values, ideals, and institutions that are embedded into the roads we drive every day. In 1923, just as the American highway bureaucracy cemented its integral role in national development and the Secretary of Agriculture approved the first national highway map, the top highway administrator in the United States delivered a speech entitled "What Our Highways Mean To Us."¹⁷ The highways, Bureau of Public Roads Chief Thomas MacDonald contended, had to be seen as more than an economic tool and project. The highways needed to be judged from a human standpoint as the fabric that bound the nation: "Roads are not merely a medium for industrial transport: they are indispensable parts of the system of communication

¹⁷ Speech by Thomas MacDonald "What Our Highways Mean To Us," February 1923, Box 6, Folder 8, Series 1: Personal, Thomas H. MacDonald Collection, Cushing Memorial Library & Archives, Texas A&M University Libraries.

without which this country could not exist as a united nation.” *Road Power* follows Thomas MacDonald’s charge; this thesis considers consequences of America’s road program, offering a holistic view of the nation and its development. It views highways as more than economic tools. “Successful road building does not rest altogether in the technical skill of the builder,” MacDonald claimed, “but also in a comprehension of the social significance of the task.” The technical skill of the builder is herein analyzed, but, so too, are the social implications of America’s greatest infrastructure project, a project that defined the role of American government, the national landscape, and American notions of labor and society.

Chapter I: The Seeds of Institutional Power

“From colonial days onward roads were for the most part a responsibility of local governments and an important reason for the latter’s existence. The automobile has made state wide and national highway planning essential. Roads must serve the integrated needs of wide areas throughout which standard construction practices and traffic rules must be formulated and introduced ... Purely local planning and construction accordingly become anachronistic”

President’s Research Committee on Social Trends, 1933¹

American road building represented a dramatic change in the relationship with federal, state, and local authorities, and their individual constituents. The Bureau of Public Roads—and its predecessor agencies/bureaus—served as a model for a new federalist relationship refined throughout the first decades of the twentieth century. An analysis of America’s highway program between 1893 and World War II illuminates the consolidation of political power in a national system, with the federal government assuming traditional roles and powers of states, localities, and private interests. Through the legal mechanism of federal aid, the informal power of information brokering, and widespread and expanding public support, the highway bureaucracy gained power and influence throughout the nation. This power manifested itself in a nationally uniform road program predicated upon a loose interpretation of Constitutional authority, oversight of state and local programs, and standardized systems of education and research. In the highway program, the federal state established public works as a key responsibility of the government, and the national public works program led to the nation-state’s development under a distinctive model of federalism.

¹ *Recent Social Trends in the United States: Report of the President’s Research Committee on Social Trends, With a Foreword by Herbert Hoover, One Volume Edition* (New York: McGraw-Hill Book Company, Inc., 1933), 175.

Historians have placed the expansion of the federal bureaucracy and governmental responsibility under the leadership of Franklin D. Roosevelt in the 1930s.² However, scholars have privileged dramatic change over narratives of continuity to explain the new power balance that Roosevelt implemented. The Bureau of Public Roads (BPR) blazed the way for a strong centralized system, and it laid the groundwork for subsequent federal infrastructure and jobs programs. Highway advocates focused on the need for “greater efficiency and better engineering” to garner support for the highway system.³ Reflecting on the history of the “state-federal cooperation” in 1939, Chief of the BPR Thomas MacDonald, whose tenure leading the BPR started in 1919, declared that the highway program served as “the magna charta [sic] for State-Federal cooperative ... improvement through the years now intervening.”⁴ The rhetoric of efficiency and the results of the highway program justified the way the BPR re-engineered the federal-state-local relationship.

The incredible growth in the federal bureaucracy built on Progressive Era ideology and reform. The ideals and practices of this era fostered an environment on which highway advocates could capitalize. Scholars have demonstrated the ways in which government functions during this period expanded, yet they typically focus on

² For an overview of the New Deal government and Roosevelt’s work, see: Eliot A. Rosen, *Roosevelt, the Great Depression, and the Economics of Recovery* (Charlottesville: University of Virginia Press, 2005); for the culmination of the road program’s initiatives in the New Deal government, see the Conclusion.

³ Article copy entitled “All Roads are Farm to Market Routes” from *Minnesota Highway News*, Mar. 1, 1930, Box 10, Folder 73, Series 2: Inter Agency, Thomas H. MacDonald Collection, Cushing Memorial Library & Archives, Texas A&M University Libraries (hereafter: THM Collection, Cushing Library, TAM).

⁴ Speech entitled “National Road Building Through State-Federal Cooperation” given by Thomas H. Macdonald at the Twenty-fifth Annual Meeting of the American Association of State Highway Officials, Oct. 10, 1939, Box 7, Folder 2, Series 1: Personal, THM Collection, Cushing Library, TAM.

the municipal and local governments.⁵ Historians of the era also agree upon the importance of extra-governmental organizations in shaping the country.⁶ While private organizations catalyzed the Good Roads Movement and local governments took initial steps in building roads, the federal government ultimately took the reins of road building.⁷ An analysis of the highway bureaucracy builds on Progressive Era studies by illuminating how and why local governments failed to conceive and implement a national road system and why they called on the federal government to build it. The BPR remains key to any study of the Progressive Era and state development, and its role can bridge the development of the nation-state through the early twentieth century.

During the Progressive Era, professionals and specialists gained credence. The BPR's personnel offers a window into the solidification of American professionalization: trained experts performed a specific duty with public support. Discussing the transformation of engineering "from its earlier empiricism and artisanship," Alan Trachtenberg notes that the changes manifested in myriad cultural and political ways, including: "the increasing specialization of knowledge, its

⁵ For the role of the Progressive reformer enacting change in local government, see: Paul Boyer, *Urban Masses and Moral Order in America, 1820-1920* (Cambridge: Harvard University Press, 1978); Shelton Stromquist, *Re-inventing "The People": The Progressive Movement, the Class Problem, and the Origins of Modern Liberalism* (Urbana and Champaign: University of Illinois Press, 2006).

⁶ For the role of the private organization affecting public life, see: Michael McGerr, *A Fierce Discontent: The Rise and Fall of the Progressive Movement in America, 1870-1920* (New York: Free Press, 2003); Michael Kazin, *American Dreamers: How the Left Changed a Nation* (New York: Alfred A. Knopf, 2011).

⁷ Existing precedent for federal activity during the Progressive Era is most clearly articulated in conservation history, drawing a line from land-use policy and national parks through the creation of Hetch-Hetchy Dam and the regulation of food products, for instance. See: Ian Tyrrell, *Crisis of a Wasteful Nation: Empire and Conservation in Theodore Roosevelt's America* (Chicago: University of Chicago Press, 2015); Karl Jacoby, *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (Berkeley: University of California Press, 2001); Kendra Smith-Howard, *Pure and Modern Milk: An Environmental History Since 1900* (Oxford: Oxford University Press, 2014); Claire Strom, *Making Catfish Bait out of Government Boys: The Fight Against Cattle Ticks and the Transformation of the Yeoman South* (Athens, GA: University of Georgia Press, 2010); Samuel Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Pittsburgh: University of Pittsburgh Press, 1959).

fragmentation into arcane regions of technique and learning, and in the growing concentration of the power accompanying specialized knowledge and skills.”⁸ BPR experts used their professional specialization to fill a void: they unified and guided the disparate and byzantine state and local road-building efforts. High modernist ideology statebuilding processes relied on engineers respected by civil society that built state institutions to carry out “a sweeping, rational engineering of all aspects of social life.”⁹ Walter Lippmann, for instance, one of America’s leading intellectuals, built on Progressive ideology to bolster an expanded federal bureaucracy led by engineers. In 1922, he challenged basic assumptions about America’s governing principles in his book *Public Opinion*. Lippmann argued that elite intellectual experts should guide the country, laying out the plans for governmental “intelligence bureaus which Washington so badly needs” both to guide the decision-making process and to inform the public.¹⁰ The Bureau of Public Roads was the realization of Lippmann’s call.¹¹

The administrative highway system model epitomized the “intelligence bureau” with centralized power. As governmental functions swelled in the 1930s, other agencies and policies followed the precedent established by the BPR. David M. Kennedy traces the role of the government from 1929 through World War II, emphasizing the many ways in which the federal government began taking responsibility for the welfare of

⁸ Alan Trachtenberg, *The Incorporation of America: Culture & Society in the Gilded Age* (New York: Hill and Wang, 1982), 64-65.

⁹ James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998), 88-89.

¹⁰ Walter Lippmann, *Public Opinion* (New York: Harcourt Brace, 1922), 149.

¹¹ Roderick Nash discusses intellectual anxieties about truly democratic principles in the writings of, among others, Walter Lippmann, Ralph Adams Cram, and Henry L. Mencken. See, Roderick Nash, *The Nervous Generation: American Thought, 1917-1930* (New York: Rand McNally, 1970), 60-65.

individuals.¹² Just as the government responded to popular calls for good roads in the Progressive Era, the government responded to calls for support in the Great Depression. While the ideals and precedent from the Progressive Era remain central to America's political economy, the key difference in the New Deal becomes the scale and scope of the national government's projects.

Through the 1910s and 1920s, the government became directly involved in building and planning the country's economic and social development through transportation, establishing a precedent of active and broad government involvement. This effort was quite different from the development of the railroads in the late nineteenth century when the government subsidized large corporations.¹³ With roads, the government itself assumed the role of private industry by controlling all levels of road building.¹⁴ The leaders of the highway program, especially BPR Chief Thomas MacDonald, changed American political history. Reflecting on his long career and the \$14 billion of public funds MacDonald had influenced by the 1940s, a newspaper pondered: "It is not irrelevant to wonder what kind of man wields such enormous power."¹⁵ Indeed, MacDonald, "a little man with somewhat rotund appearance and a Scotch name," wielded immense power in his federal job in D.C., which translated into

¹² David M. Kennedy, *Freedom From Fear: The American People in Depression and War, 1929-1945* (New York: Oxford University Press, 1999).

¹³ For a discussion of the way the railroad corporations acted and how they received substantial government funding, see: Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: W.W. Norton & Company, 2011). For a discussion of the societal changes wrought by the railroads and the diverse stakeholders, see: William Deverell, *Railroad Crossing: Californians and the Railroad, 1850-1910* (Berkeley: University of California Press, 1994).

¹⁴ This chapter's analysis centers on the 1916 and 1921 highway acts, which Bruce Seely discusses. However, present coverage expands beyond Seely's economic and technocratic interpretation by focusing on the political shifts brought by this system and the changed perspective of government responsibility. See: Bruce E. Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987).

¹⁵ Paul W. Kearney, "HE'LL BUILD TOMORROW'S ROADS," *New York Herald Tribune*, Jun. 25, 1944

influence throughout America.¹⁶ His bureau not only re-organized the American map, but re-defined American federalism.

In addition to the actors at the Bureau of Public Roads, leading state and industry officials and experts supported the BPR's work, sanctioning—both implicitly and explicitly—the new role of the government. Writing for the *New York Herald Tribune* in 1944, Paul Kearney traced good roads back to when “Caecus built the Appian Way,” but more importantly he noted a new change: “Roads [were] strictly an issue in which the ancient and thorny doctrine of State's Rights prevail[ed].”¹⁷ However, in the early twentieth century, roads had come under a system of centralized federal power. The BPR centralized decision-making and planning because of the disparate and inefficient state programs. Local decision making had been too decentralized, too democratic, and thus, a national system (or even state) system of roads was never realized.¹⁸

Informational Power

In 1893, Congress appropriated \$10,000 to the Office of Road Inquiry (ORI) to research and publish information on road development. Until 1912, Congress did not appropriate any money for the direct construction of roads. The ORI operated under the United States Department of Agriculture (USDA), one of the dominant federal

¹⁶ “Utah as Exemplar,” *Salt Lake Tribune*, Apr. 18, 1938.

¹⁷ Paul W. Kearney, “HE'LL BUILD TOMORROW'S ROADS,” *New York Herald Tribune*, Jun. 25, 1944

¹⁸ The process of excessive democratic impulse explains why the states had failed in their road building programs. Neither standard materials, processes, and quality nor effective communication systems guided the process. There is a parallel in the Civil War. David Donald argues that the South lost because it “Died of Democracy” through lack of centralized control or authoritative decisions. By contrast, then, the North's authoritarian actions and limits to democracy proved to be a vital—and positive—structure. See: David Herbert Donald, “Died of Democracy” in *Why the North Won the Civil War* (New York: Touchstone Books, 1996), 81-92.

departments in the late nineteenth century. The initial \$10,000 fund came through the 1893 Agricultural Appropriations Act because the original argument for the roads focused on the need for rural farm-to-market roads. Understating the connection between roads and agricultural development, the Assistant Director of the USDA's roads office laid out the need for roads in an early edition of *Farmers' Bulletin*: "The condition of the common roads in this country, especially in the Middle West, is so deplorable at certain seasons of the year as to operate as a complete embargo on marketing farm products. It therefore behooves every interested citizen to know something about the location, drainage, construction, and maintenance of the earth road."¹⁹ The federal government took its initial steps towards road development when the problem became nation with the issue of food supply and transportation networks, as well as when it fell under the auspices of agriculture, a function for which the national state had already taken significant responsibility. The USDA maintained control of the nation's road program for decades.²⁰

Before the federal government took direct responsibility for building roads, government officials directed state governments in how to institute state aid and construction programs. Therefore, the public roads office gained soft power by virtue of the prestige state politicians, engineers, and road advocates bestowed upon federal highway engineers. Beginning at the turn of the twentieth century, the national road office collected data on how different states ran their programs—costs, type of labor,

¹⁹ Maurice O. Eldridge, "Earth Roads," U.S. Department of Agriculture Farmers' Bulletin No. 136 (Washington: Government Printing Office, 1902), 4.

²⁰ Under the Reorganization Plan No. 7 of 1949, the Bureau of Public Roads transferred to the Department of Commerce; in 1967, the Department of Transportation established a Federal Highway Administration, which, by Aug. 10, 1970, absorbed the entire Bureau of Public Roads.

laws, administration, road surfacing material, etc. By the early 1900s, local engineers, politicians, and concerned public citizens turned to the federal highway office for information. States had failed to articulate a coherent and effective system of roads to serve motorists. The problem of national roads exceeded local piecemeal ability and progress. Officials at the national office fielded many questions concerning road construction models and plans.²¹

Federal road experts compiled a comprehensive bulletin on state programs, including recommendations for successful administration. In 1906, with a tight budget, the Office of Road Inquiry (ORI) sought to cement its role as the authority on all matters highway. Officials at the office sent all states a questionnaire with the goal of compiling a full picture of the nation's diverse programs and ultimately providing uniform guidance.²² The ORI recommended three models for road building: cooperative, centralized, and localized, and by 1910, 30 states had implemented one of these models.²³ The bulletin laid out sample laws for local and state governments, material standards and means of sourcing, specifications for bridges, and sample labor contracts with wage rates.

In addition to gaining soft power by working with state officials and engineers, the highway office worked directly with educational institutions to shape and inform a

²¹ For example: Correspondence from S.C. Phipps to Director of Office of Road Inquiry, April 21, 1903, "State Aid 1893-1907" Folder, 530/21/22/2/Box 34, "Bureau of Public Roads Classified Central File 1912-1950" Series, RG 30, NARA-II; Correspondence from A.R. Shattuck to Martin Dodge of Department of Agriculture, August 9, 1904, "State Aid 1893-1907" Folder, 530/21/22/2/Box 34, "Bureau of Public Roads Classified Central File 1912-1950" Series, RG 30, NARA-II (hereafter: BPR Series, RG 30, NARA-II).

²² Circular from Director of Office of Road Inquiry to State Highway Departments, January 12, 1906, "State Aid 1893-1907" Folder, 530/21/22/2/Box 34, BPR Series, RG 30, NARA-II.

²³ Correspondence from L.W. Page to State Highway Departments, February 24, 1910, "State Aid 1893-1907" Folder, 530/21/22/2/Box 34, BPR Series, RG 30, NARA-II.

generation of engineering students. At the beginning of the twentieth century, institutions of higher education began offering highway engineering courses, and professors and administrators often reached out to the federal government for guidance on subject matter and recommended texts. This curriculum influence represented a shift from a time in which engineering education had largely been guided by local, regional, industrial, and political interests, such as state-funded mining schools in Colorado and Montana.²⁴ The work of the federal officials represented a countervailing effort to establish standardized curricula through the infusion of national principles and uniformity. Institutions, such as the Cornell University College of Civil Engineering, endorsed whole cloth this curriculum cooperation.²⁵

To achieve national engineering standards, in March 1909 Logan W. Page, the Director of the Office of Public Roads, sought to compile data on what colleges offered and what colleges needed. He sent survey questionnaires to hundreds of schools, noting: “This [good roads] movement has emphasized the fact that there are not a sufficient number of thoroughly qualified highway engineers available at the present time to meet demand. Therefore, we consider that in order to overcome this condition, it is necessary for the engineering schools and colleges throughout the country to devote greater attention to the subject of highway engineering.”²⁶ Working with schools, Page helped guide a uniform curriculum that relied on government publications as course texts:

²⁴ Atushi Akera and Bruce Seely, “A Historical Survey of the Structural Changes in the American System of Engineering Education” in *International Perspectives on Engineering Education: Engineering Education and Practice in Context*, vol. 1, ed. S.H. Christensen, et al. (New York: Springer International Publishing, 2015), 7-32.

²⁵ For example: Correspondence from J.D. Schurman of Cornell University College of Civil Engineering to L.W. Page, March 29, 1909, “Old Public Roads Corres. – Hwy Engr. Circ. Letters to Colleges 1909” Folder, 530/21/23/3/Box 90, BPR Series, RG 30, NARA-II.

²⁶ Circular from L.W. Page to Engineering Departments, March 10, 1909, “Old Public Roads Corres. – Hwy Engr. Circ. Letters to Colleges 1909” Folder, 530/21/23/3/Box 90, BPR Series, RG 30, NARA-II.

“Highway Construction” by Austin T. Byrnes and “Roads and Pavements” by Ira O. Baker.²⁷

By establishing itself as America’s information broker, the highway bureaucracy consolidated educational decision-making, and thus power, within its own ranks of engineers. Page communicated and worked with all major engineering schools across the country, including Harvard, University of California—Berkeley, Columbia, Tufts, Georgetown, University of Virginia, and more.²⁸ The role of the governments actively organizing experts offers a distinct paradigm from other systems of professionalization, such as the “fraternity of experts,” who “[i]n lieu of designated governing authorities [established] information exchange networks” to develop the electrical grid.²⁹ Page’s efforts worked: by 1917, 76 colleges and universities established courses in road building.³⁰ In 1921, the American Automobile Association lauded the 112 (of the 127 total) engineering schools for operating courses in highway engineering, which indicated that “the educators of the country are now beginning to grasp the significance of the road movement and to realize the need for trained highway engineers.”³¹ In addition to educating university students and developing a uniform class of highway professionals, the highway office published a public monthly magazine. In the salutatory letter in the inaugural edition, Logan W. Page informed the readers: “If [this

²⁷ Austin T. Byrne, *A Treatise on Highway Construction, Designed as a Text-Book and Work of Reference for All Who May be Engaged in the Location, Construction, or Maintenance of Roads, Streets, and Pavements* (New York: John Wiley & Sons, 1908); Ira Osborn Baker, *A Treatise on Roads and Pavements* (New York: John Wiley & Sons, 1906).

²⁸ Table of Colleges and Responses, “Old Public Roads Corres. – Hwy Engr. Circ. Letters to Colleges 1909” Folder, 530/21/23/3/Box 90, BPR Series, RG 30, NARA-II.

²⁹ Julie A. Cohn, *The Grid: Biography of an American Technology* (Cambridge: The MIT Press, 2017), 27.

³⁰ American Automobile Association, *Highways Green Book, Second Annual Edition* (Washington, D.C.: Andrew B. Graham Co., 1921), 390.

³¹ *Ibid.*

publication] may help in even a small measure toward the stimulation of ideas making for a standardization of effort in road construction and maintenance during the stressful period through which the civilized world is passing then, indeed, will it be justified.”³² The highway bureaucracy made these entrées into shaping road education and direction in its infancy, and this soft power increased as the office’s influence and budget grew.

As highway building progressed, for instance, in 1920 the United States Commissioner of Education held a conference which “prominent educators and engineers” attended. Due to the diverse and influential attendees, the highway bureaucracy saw this conference as the culmination of their effort to standardize the nation’s highway information campaign. This conference concluded that “to build up a

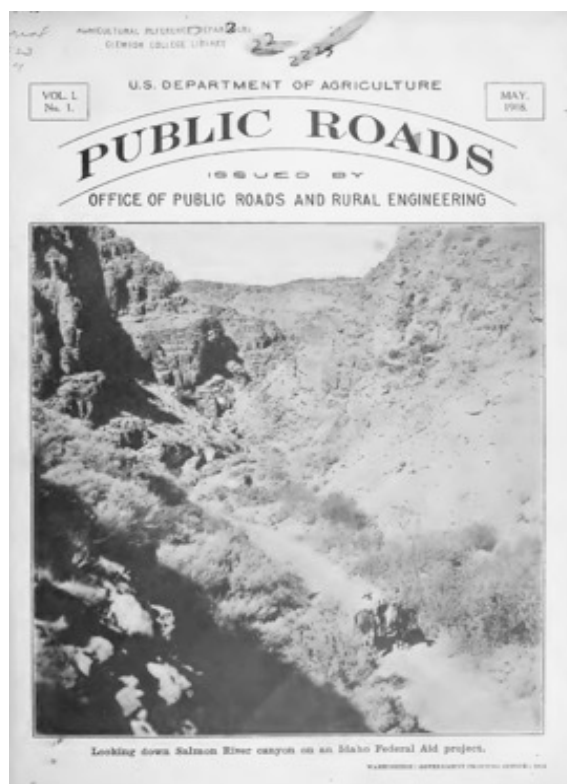


Figure 1.1: The OPRRE published the first edition of *Public Roads* in 1918. As a booster and informer, the OPRRE’s work targeted engineers, administrators, and the public.

³² Logan W. Page, “Salutary Letter,” *Public Roads* 1, no. 1 (May 1918), 3.

sufficient body of trained engineers guiding the development of our highways, it would be necessary to give more weight to the study of highway engineering in the curricula of our colleges and technical skills.”³³ Following this resolution to train engineers to guide highway development, the Departments of Education and Agriculture established a permanent committee to fulfill this goal. This committee included representatives of the Society for the Promotion of Engineering Education, the War Department, the Bureau of Public Roads, the automotive industries, and the Association of State Highway Departments.

Because American highway engineers all received the same training, programs across the nation looked similar. Take, for instance Philadelphia: in 1912, the highway bureau had only one trained engineer; in the years after 1916, though, the city boasted nearly 200, all trained in BPR-influenced programs.³⁴ Although the Philadelphia engineers functioned on city roads, which were outside the purview of the 1916 highway act, they built roads to the specifications they had learned in their college courses. By standardizing the education of highway leaders, the BPR ensured that roads across America were built to a certain standard and guided not by local patronage or influence but by the direction of trained professional experts.

In addition to the promotion of formal educational standards, the Office of Public Roads acted as a public educator and lobbyist for roads. In conjunction with local good roads groups and national railroads, OPR agents traveled as good roads ambassadors on “Good Roads Trains.” These trains traversed the country, offering the

³³ Address Before New York Institute of Consulting Engineers, Oct. 13, 1920, Box 6, Folder 8, Series 1: Personal, THM Collection, Cushing Library, TAM.

³⁴ Martin J. Schiesl, *The Politics of Efficiency, Municipal Administration and Reform in America: 1880-1920* (Berkeley, University of California Press, 1977), 164.

public information on the benefits of roads, tips on constructing and maintaining roads, a display of an improved road section, and advertisements for road machinery. Local interested businesses promoted the Good Roads Trains and the experts they carried. When Frisco Railroad Company and the Office of Public Roads came to Oklahoma, for example, the First National Bank sent over 400 of its subscribers an invitation to the festivities and lectures, noting: “The experts and officials in charge of the train will give explanations of everything, and deliver lectures relative to the construction and maintenance of good roads.”³⁵ Good Roads trains crossed the country for over a decade, funded and operated by railroad groups with the OPR taking credit and bolstering its reputation. These trips reached masses of people, helping the OPR and the Good Roads Movement. In 1911, for example, a Good Roads Train traveled Pennsylvania, stopping for 174 lectures and accumulating an audience of approximately 53,000 people. Reporting on the Pennsylvania trip, the OPR laid out its goal and mission: “The object of the tour was to arouse interest in better roads and to instruct the farmers and road officials generally.”³⁶ Railroad corporations supported road construction and promotion because roads, at that point, increased their business: by constructing better “spoke roads,” which went between local farms/towns and railroad stations, more farmers would ship their goods by train and participate in the national economy. “The object of this train,” a Good Roads Train announcement (Fig. 1.2) reads, “is to give practical instruction ... with the view of inducing [road] construction and saving millions of

³⁵ Correspondence from First National Bank to Subscribers, June 6, 1912, “Good Roads Train 1911-12” Folder, 530/21/23/4/Box 95, BPR Series, RG 30, NARA-II.

³⁶ Report: EDUCATIONAL WORK, April 1, 1911, “Good Roads Train 1911-12” Folder, 530/21/23/4/Box 95, BPR Series, RG 30, NARA-II.

PLEASE POST THIS ANNOUNCEMENT
AND
TELL YOUR FRIENDS AND NEIGHBORS

GOOD ROADS TRAIN

and
ROAD IMPROVEMENT EXHIBITS.

THE SOUTHERN RAILWAY
In Connection with the
**OFFICE OF PUBLIC ROADS,
U. S. DEPARTMENT OF AGRICULTURE.**
will run over its system a train carrying
ROAD BUILDING EXPERTS
from the U. S. Department of Agriculture who will give
**Free Stereopticon Lectures
and Practical Instructions for
Building Good Roads.**

There will also be exhibited on the train
**WORKING MODELS, RUN BY ELECTRICITY,
OF IMPROVED ROAD BUILDING MACHINERY.**

PARTIAL SCHEDULE.

June 13. Tuesday, Moscow, Tenn. . . . 10 a m	June 16. Friday, Decatur, Ala. 10 a m
June 14. Wednesday, Juka, Miss. . . 10 a m	June 17. Saturday, Scottsboro, Ala. . . 10 a m
June 15. Thursday, Florence, Ala. . . 10 a m	June 19. Monday, Dalton, Ga. 10 a m
June 15. Thursday, Tuscumbia, Ala. 3 p m	June 20. Tuesday, Rome, Ga. 10 a m
	June 21. Wednesday, Dallas, Ga. . . . 10 a m

The free lectures and demonstrations will be conducted by D. H. Winslow and H. C. Wells, Superintendents of Road Construction, U. S. Department of Agriculture. W. J. Hurlbut, Agent, Land and Industrial Department, Southern Ry., and representatives of the American Highway Association and of the State will accompany the train.

THE OBJECT OF THIS TRAIN
is to give practical instruction in the building and maintenance of improved roads, with the view of inducing their construction and saving millions of dollars annually to the farmers in the movement of their crops to the railway.

FOR DETAILED INFORMATION ABOUT THIS TRAIN, ADDRESS

L. W. PAGE, Director, Office Public Roads, U. S. Dept. Agriculture.	M. V. RICHARDS, Land and Industrial Agent, Southern Railway
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WASHINGTON, D. C.

ALL ARE INVITED.

Figure 1.2: The OPR worked with corporations, such as The Southern Railway, to foster support for good roads. Highway engineers toured the countries, asserting their position as experts, elucidating the benefits of good roads, and demonstrating road construction techniques. Source: NARA-II 530/21/23/4/95.

dollars annually to the farmers in the movement of their crops to the railway.”³⁷ The federal government, then, cooperated with businesses to expand its role as a lobbyist and educator. These publicity and informational campaigns came prior to any appropriation or mandate that allowed the federal highway bureaucracy to involve itself directly with construction.

³⁷ See Figure 1.2.

Federal Aid Act of 1916

Informational and educational campaigns only went so far. In the decades following the 1893 appropriation that established the Office of Road Inquiry, the public clamored for good roads. During this time, the role and responsibilities of the office changed, and this shift occurred because of the new American political economy. In 1893, private businesses largely determined the future of public works and took responsibility for building infrastructure.³⁸ In addition to the laissez-faire economy of the late nineteenth century, little consensus existed on the future of road building: the automobile had not yet penetrated all levels of American society. By the early 1910s, however, car culture spread across America. In 1912, Congress passed the first appropriation that directly involved the federal government in road building. This 1912 act, like the 1893 appropriation for research, reflected the context in which was passed: the act appropriated a mere \$500,000 to the building of post roads. While the federal government sought to build post roads, a duty enumerated in the Constitution, many states established road building departments and commissions. As the federal government wet its feet in tangible road building, its state and local counterparts still clamored for good roads for motorists. Although the \$500,000 from the 1912 appropriation for fiscal year 1913 accomplished little, the act laid the groundwork for subsequent federal aid act.

³⁸ Although the government offered some support and guidance of nineteenth century infrastructure projects, private companies remained dominant through the Gilded Age. For a discussion of the role of private organizations and infrastructure in the nineteenth century, see: Ryan Dearing, *The Filth of Progress: Immigrants, Americans, and the Building of Canals and Railroads in the West* (Berkeley: University of California Press, 2016). For a discussion of the Gilded Age society and modernization, see: Rebecca Edwards, *New Spirits: Americans in the Gilded Age, 1865-1905* (Oxford: Oxford University Press, 2006).

As the federal government stuck to tasks enumerated in the Constitution, such as building post roads, states undertook and underwrote early road building efforts. In this early localized movement, no federal law existed with which states had to comply; the government wielded power by virtue of having useful information. Federal officers often disappointed concerned citizens, as they did in responding to a Mississippi man who sought federal assistance in local road building in 1915: “No federal legislation in regard to road construction or location which the States are obliged to obey is in existence. Road legislation is at present entirely under the control of the States and local communities.”³⁹ The lobbying of citizens, such as the letter-writer from Mississippi C.I. Simpson, pushed the needle: federal officials recognized the widespread desire for a centralized road building program. In an era in which efficiency dominated as the ultimate goal, the byzantine and local road programs lacked a coherent vision, a national plan, or any oversight that ensured efficiency.⁴⁰

In attempting to reconcile federal and state road development goals, the necessity of a federal fiscal appropriation became clear, and the Joint Committee on Federal Aid in the Construction of Post Roads undertook a debate about funding a system. Senator Jonathan Bourne, Jr., the committee’s chairman, informed members of his committee: “Almost any kind of Federal participation in highway improvement involves either apportionment of the national funds among the several States or cooperative contribution on the part of several States. Some plans include both of these

³⁹ Correspondence from Assistant Director PJS Wilson to C.I. Simpson, August 31, 1916, “Road Legislation—July 1, 1915-June 30, 1919” Folder, 530/22/21/3/Box 4262, BPR Series, RG 30, NARA-II.

⁴⁰ On the efficiency of the Progressive Era, as epitomized by Frederick Winslow Taylor’s scientific method of production, see: Robert Kanigel, *The One Best Way: Frederick Winslow Taylor and the Enigma of Efficiency* (Cambridge: The MIT Press, 1997).

provisions.”⁴¹ Indeed, as Congress formed a plan of road development, the plan included state cooperation led by a federal informational clearinghouse and guide, as well as a fiscal apportionment. During the 1910s, politicians had a difficult time agreeing on what form the road building program should take. Over the years, though, this method of cooperation, especially informed through the federal aid money, created a new paradigm of cooperation between states and the federal government. As the states needed—and called for—the federal government to organize national road building efforts, the government responded by codifying stipulations in the funding to ensure that states effectively and honestly used the federal funds. The Congressional Committee’s debate culminated, after a series of failed bills during the early 1910s, in a federal aid act that sufficiently satisfied enough representatives to enact the legislation.

With the 1916 federal aid act, a dramatic shift in the processes and conception of government power occurred. This bill changed the way in which the federal government cooperated with state organizations. In typical Progressive Era fashion, a diverse coalition came together to call for road building: farmers, motorists, truckers, railroad corporations, laborers, and prison wardens. This “motley mix of people” sought to use the government to effect change.⁴² The lobbying by such a diverse group ensured that politicians across lines of party, geography, and ideology could agree on and pass the federal aid act. At their 1915 annual meeting in Oakland, California, the American

⁴¹ “Good Roads: Tables Showing in Condensed Form for Ready Reference and Comparison Data Regarding the Highway Systems of the Leading Nations of the World and Statistics Bearing Upon Federal Aid in Highway Improvement in the United States” compiled by Jonathan Bourne, Jr., “Tables—Data RE Highway Systems of Nations of the World 1913” Folder, 530/21/23/5/Box 98, BPR Series, RG 30, NARA-II.

⁴² Tammy Ingram notes that the exceptional, yet uneasy alliance was somewhat common for Progressive Era reform campaigns, such as the diverse coalitions supporting Prohibition or electoral reforms: Tammy Ingram, *Dixie Highway: Road Building and the Making of the Modern South, 1900-1930* (Chapel Hill: University of North Carolina Press, 2014), 15.

Association of State Highway Officials (AASHO), one of the most powerful highway lobbying groups, approved a resolution that ultimately became (almost exactly) the bill Congress ratified a year later. The AASHO provided this legislation to friendly Senators and Representatives, and they shepherded the bill through Congress. The people who helmed the AASHO also ran the federal highway office; the uniformly trained engineers comprised the AASHO membership. In addition to the AASHO, many private organizations and corporations lobbied for the bill's passage. The bill, then, centralized power in the federal government, either incorporating or usurping the groups who had lobbied for its passage.

The 1916 Act, also known for its sponsors as the Bankhead-Shackleford Bill, appropriated \$75 million over five years to the construction of roads. Most important, though, was the fact that for states to receive part of the appropriation, they had to “establish a State highway department adequate in the opinion of the Secretary of Agriculture.”⁴³ The federal government gained power by mandating that states conform to its ideal of a highway structure, and this mandate came by virtue of the state appropriations the Bureau of Public Roads, housed in the Department of Agriculture, could either withhold or appropriate. The vast majority of states quickly assented to this federal control; state governors submitted certificates demonstrating their states' compliance with the law. At the time of the act's passage, only California's highway commission conformed to the model approved. However, as Secretary of Agriculture D. F. Houston noted in 1919, “No State ... has failed to place itself in a position to

⁴³ Report on U.S. Bureau of Public Roads and Its Work, May 1, 1932, Box 8, Folder 40, Series 3: U.S. House of Representatives, 1926-1942, Carl Albert Congressional Research and Studies Center, the University of Oklahoma (hereafter: CAC, OU).

receive the benefits of the Act, and there are now forty-eight responsible State agencies, which, together with the Bureau of Public Roads, make up the administrative organization to carry into effect the policy of the Congress.”⁴⁴ Because of the \$75 million carrot the federal government offered, every state formed a highway department, overhauled its existing department, or reorganized its highway commissions.⁴⁵ This bill transformed the BPR’s informational power into financially-backed mandates and power, and most states welcomed this new relationship because of their desire for good roads and federal support. This model cemented a process of state-federal cooperation that has been replicated throughout American history.

States deferred to federal authorities, even soliciting the national state’s funds and advice. Wyoming’s state constitution, for example, prohibited spending state funds on internal improvement projects in 1916, yet Wyoming quickly reorganized its governmental system to conform to the federal law’s mandate. Changing the state constitution required a two-thirds approval in a popular vote and an act by the legislature. Because of the popular support for good roads, changing Wyoming’s Constitution proved easy. Immediately after the 1916 federal aid act, Wyoming legislators and Wyoming’s governor contacted BPR officials for recommendations on running a campaign to secure passage of a constitutional amendment. On 7 November 1916, Wyoming’s voters overwhelmingly approved of the federal aid act; they refused to leave federal improvement moneys unutilized. After the popular assent to federal aid and control, the legislature confirmed the people’s choice by adopting House Joint

⁴⁴ Circular to all District Engineers of Bureau of Public Roads, May 19, 1919, “1933-17” Folder, 530/22/22/1/Box 1870, BPR Series, RG 30, NARA-II.

⁴⁵ Seely, *Building the American Highway System*, 47.

Resolution No. 4. Governor John B. Kendrick informed the Secretary of Agriculture that he and state legislators were engaged in the “making of an appropriation sufficient to meet whatever money is offered [sic] by the federal government and to provide for a definite good roads program.” Gov. Kendrick continued: “The bills which are being prepared also contain the assent to the provisions of the federal act.”⁴⁶ The federal aid act attached strings to the money, and states did not contest these conditions. As Thomas MacDonald notes, state legislatures “quickly complied with the federal requirements.”⁴⁷

The federal aid required that states match the federal funds, and the federal administrators ensured the fund matching stipulation. When the governors submitted their certificates to the federal government, they detailed the method the state employed in raising funds. Moreover, every road building proposal required the states to demonstrate how they would fund the individual project. The BPR scrutinized applications and funding sources to ensure conformity, thereby accruing further control over how the states raised and spent money. This process attempted to eliminate corruption and favoritism in how states chose contractors and spent money; it also ensured that states built roads to standards established by expert engineers. This oversight ensured a national system for uniform and good roads, differing from the previous corporation-led efforts to build national railroads. Perhaps if the railroads had such federal oversight, they would have been faster to adopt and implement standard gauges.

⁴⁶ Correspondence from Governor John B. Kendrick of Wyoming to D.F. Houston of Department of Agriculture, January 1, 1917, “Wyoming General August 1916 – December 31, 1918” Folder, 530/22/53/7/Box 3167, BPR Series, RG 30, NARA-II.

⁴⁷ Address Before Road Builders Association in Louisville, Feb. 13, 1920, Box 6, Folder 2, Series 1: Personal, THM Collection, Cushing Library, TAM.

In the 1916 federal aid act, the Secretary of Agriculture had absolute oversight: the Secretary wielded “the final authority to determine the adequacy of the improvements and to grant or withhold the Federal assistance accordingly.”⁴⁸ In convincing fellow legislators of the merits of this bill, Representative Edward Browne asked his fellow representatives to place their faith in the wisdom and planning of the czar of roads, the Secretary of Agriculture. On the floor of the House, Browne declared: “You can not get a cent for any road unless [the Secretary of Agriculture] O.K.’s it and says that it is a road that ought to have Federal aid. He is not going to do foolish things. We have to place in every public official certain discretion and he exercises his sound judgment upon it.”⁴⁹ Browne expected his legislators to believe in the Secretary of Agriculture’s apolitical expertise and not second guess him. Indeed, the Department of Agriculture wielded significant control over the highway program.⁵⁰

The Highway Bureaucracy

In addition to establishing fiscal incentives for states to comply with the federal government, the federal aid act established higher standards for road building enterprises, and it concentrated decision-making power in a hierarchical government system. This bureaucracy intended to establish federal oversight, raising standards on road construction and avoiding financing state boondoggles. “The steady raising of standards in these States during the period since 1917,” a 1932 pamphlet on the BPR’s

⁴⁸ *An Act To provide that the United States shall aid the States in the construction of rural post roads, and for other purposes*, Public Law No. 156, U.S. Statutes at Large 39 (1916): 355-359.

⁴⁹ Representative Browne speaking on HR 7617 on January 19, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1272.

⁵⁰ Seely, *Building the American Highway System*.

work determined, “is attributable in no small measure to the improvements required by the Bureau as a condition of its approval of Federal-aid road plans.”⁵¹ For a state to receive federal aid for a road project, the BPR needed to sign off on the project. According to BPR statistics, about 80% of projects were immediately accepted, 10% were approved with suggestions for improvement, and 10% were criticized and held for changes.⁵² State highway officials knew they needed the federal government’s approval, so they created highways that would satisfy federal standards. Beyond the fiscal incentive, though, the federal standards made sense to the engineers trained under BPR-guided curricula; the standards ensured uniformity, durability, and safety.

While the bureaucracy’s rhetoric resonated with a public who believed in scientific expertise, dissent arose. Much local dissent stemmed from centralized decisions regarding routes, specifications, contracts. An editorial in the *Jefferson County [Wisconsin] Union* lamented the overbearing power of MacDonald’s BPR with the federal aid process: “It will be seen that with Mr. MacDonald sitting on the federal money bag, every engineer has to knuckle down and ‘kow-tow’ to his views or get booted out of the ‘golden circle’. His road will *not* be approved.”⁵³ Indeed, MacDonald’s BPR controlled the nation’s highway program, yet his centralized program allegedly ensured ease of access, effective construction, and the best possible roads. In an era in which data and efficiency were central to public support, MacDonald’s scientific

⁵¹ Report on U.S. Bureau of Public Roads and Its Work, May 1, 1932, Box 8, Folder 40, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

⁵² *Ibid.*

⁵³ Article from *Jefferson County Union* entitled “The Perfect Road,” “P.S.&E. – July. 1924-Dec. 1924” Folder, 530/22/17/7/Box 1735, BPR Series, RG 30, NARA-II.

research further bolstered his efforts to institute a nationally standard and efficient road building program.

Another way in which the government ensured states applied the federal standards was privileging of engineers and technocrats. The 1916 federal aid act stipulated that reorganized state highway commissions must allot significant control to the state engineer, thereby ensuring the programs and commissions were run by an engineer trained in a uniform curriculum. For example, Colorado's law stipulated that the State Highway Engineer had complete control over all work done on the state's roads; similarly, Maryland's highway commission, run by an engineer, had the power to "make such changes in the highway system as so it may seem desirable." Many state highway commissions operated entirely outside the normal political confines of the state legislature: when states reorganized their highway commissions after 1916, Kansas, for example, "Authorize[d] the State Highway Commission to enter into all contracts necessary with the Secretary of Agriculture." Similarly, Texas "authorize[d] the State Highway Department to cooperate with the United States government to enter into all necessary agreements with the United States."⁵⁴ The state highway commissions thus operated outside the political mechanisms of states, creating a direct and unimpeded linkage to the federal government. In addition to streamlining the process, this change helped rid the process of patronage and politics.

The BPR insisted on changing the nation's governing model in the way it conducted business with states to ensure a top down relationship. When Michigan, for

⁵⁴ For all the states' certifications and laws demonstrating compliance with the USDA guidelines, see: Book of Certificates from States Submitted in Compliance with the Requirements of the Federal Highway Act, n.d., 530/22/14-15/7-1/Box 1592, BPR Series, RG 30, NARA-II.

example, submitted its governing documents for the state highway department to the BPR for approval, the Department of Agriculture Solicitor informed the state that everything was satisfactory “except that it is believed the construction bond should be amended by substituting the words State of Michigan for the words State Highway Commissioner.” The highway office insisted on dealing with the highway commission outside the political currents of the state’s elected officials to maintain an apolitical presentation of power. However, the state needed to vest its powers in the highway commission. Informing Michigan of the required change, the federal road office told the state, as it told other states documents requiring similar changes: “The Highway Commissioner merely act[s] as the State’s agent.”⁵⁵ The BPR established a new means by which it would work with the states, vesting the state’s powers and authority in the highway commission and bypassing local politics.

Underlining the new federal oversight and supremacy in the balance of power, the BPR became intimately involved in directing and supervising the work of the states. Beyond the BPR’s headquarters in Washington, D.C., the BPR had 12 district organizations, each of which (except Alaska’s⁵⁶) was responsible for two to eight states. Reporting to the district office, each state had a state BPR office with an engineer responsible to the federal government, not the state. With this system of offices, the federal government influenced every state’s work. This system also gave the federal government direct constant access to oversee projects throughout the nation. Though the BPR established a centralized hierarchical system, the local presence of BPR

⁵⁵ Correspondence from Solicitor Wm. M. Williams to Office of Public Roads and Rural Engineering, September 11, 1917; and Correspondence from District Engineer to Michigan State Highway Commissioner, August 23, 1917, Folder One, 530/22/37/1/Box 2465, BPR Series, RG 30, NARA-II.

⁵⁶ Although Alaska was not yet a state, the BPR maintained a district office there to develop roads.

engineers fostered a dialogue with state and local officials while helping bring the federal government into localities.⁵⁷ Throughout the construction of federal aid projects, the BPR engaged in field work, including: (1) Field inspection on account of project statement; (2) Review of the project statement; (3) Field inspection on account of plans; (3) Review of plans; (4) Attendance at bid openings; (5) Construction inspections; and (6) Maintenance inspection. Throughout the course of a project, a BPR field engineer would conduct 12-16 inspections. After the state completed the project, the BPR inspected the road at least twice a year to ensure proper maintenance. The federal aid act required states build strictly according to the submitted plans and maintain all federal aid roads, and these inspections assured state compliance.⁵⁸ Although established as a cooperative measure, the federal government held the upper hand.⁵⁹

To accomplish the goal of oversight and control, BPR employees recognized they needed the support of state politicians and engineers to succeed. Good roads themselves, BPR officials maintained, secured favorable public opinion. In his first communication as chief, MacDonald declared to all bureau engineers: “Our success will depend largely upon the attitude of mind and confidence we establish on the part of the State officials.”⁶⁰ From the original growth of the BPR, Secretary of Agriculture D. F.

⁵⁷ This process parallels the works the of another USDA function in which federal administrators created a localized process through their presence in varied localities under the USDA Agricultural Experiment Stations. These stations offered opportunities for cooperative work based on local climatic variations and needs, and they built the federal government into communities in another form of soft power.

⁵⁸ “U.S.—Congress. (67th congress.) Federal aid in the construction of roads.,” Item, 530/24/22/1/Box 6, BPR Series, RG 30, NARA-II.

⁵⁹ For example of how district engineers scrutinized local processes and mandated change, see: Memorandum to all District Engineers of Bureau of Public Roads, June 25, 1936, “1934-1935-1936” Folder, 530/22/22/1/Box 1870, BPR Series, RG 30, NARA-II.

⁶⁰ Circular to all District Engineers and Field Forces of Bureau of Public Roads, May 23, 1919, “1933-17” Folder, 530/22/22/1/Box 1870, “Bureau of Public Roads Classified Central File 1912-1950” Series, RG 30, NARA-II.

Houston defined the Bureau's cooperative program: "This Department," he declared, is "closely cooperating with the State highway commissions, informally as well as under the terms of the law."⁶¹ Informal power came through personal relationships and guidance from BPR officials. The data, too, shows how states assented to the new program: in 1916, just three percent of the nation's 75,311 miles of road was maintained by state highway departments; at the end of 1918, over eight percent of the nation's 203,556 miles was so maintained.⁶² After President Wilson signed the 1916 Federal Aid Act, he proclaimed: "Wherever you have a good road, you have tied a thong between that community and the nation to which it belongs."⁶³ More than tying the community to the nation, the act brought the federal government into the community.

World War I Infrastructure and State Development

In the background of America's push to build good roads, war raged in Europe. World War I tested America's ability to mobilize and organize a nation under one cause. The war, largely opposed before America abandoned its position of neutrality in 1917, allowed the American government to test its unifying power. Although many of the war's social reforms and programs were not entirely realized or only transitory, the restructuring of the government's relationship to the economy and individual citizens marked one of the greatest changes of the wartime experience.⁶⁴ Wartime mobilization

⁶¹ Correspondence from D.F. Houston to U.S. Senator Knute Nelson, May 14, 1918, "Federal Aid System—1918-17" Item, 530/22/23/6/Box 1956, BPR Series, RG 30, NARA-II.

⁶² Speech at Conference on Highway Engineering Education entitled "The Widening Field for Engineers in Highway Improvement and Their Training for This Field," May 14, 1920, Box 6, Folder 5, Series 1: Personal, THM Collection, Cushing Library, TAM.

⁶³ As quoted in: John A. Jakle and Keith A. Sculle, *Motoring: The Highway Experience in America* (Athens: University of Georgia Press, 2008), 33.

⁶⁴ For the social changes during the war, especially with regards to women and African-American women, Dumenil delves into what changes lasted (e.g., suffrage) and what did not last (e.g., new

reveals much about how the American government responded to the threat of global war. “The war,” David Kennedy argues, “forced both government and business to think and act on an unprecedentedly large and integrated scale.”⁶⁵ Mobilization’s change manifested in both internal national restructuring and international comparisons. Both of these processes further catalyzed the centralized national road building system, and the processes laid the groundwork for a new relationship between the government and all sectors of the economy.

The Great War, as historian Ronald Schaffer argues, created the war-welfare state, ushering the federal government into nearly every aspect of American society.⁶⁶ This centralized state grew because of the demands of an international war: mobilization provided the government an opportunity to centralize economic and social processes. Although transportation and supply systems remained central to mobilization, the government needed to organize all components of American life to meet the demands of war. Highway and road construction played a central role in troop transport, but the greatest effect of the war on the bureaucratization of roads was twofold: first, the contemporaneous mobilization efforts helped cement a model of federally organized national projects; second, the war forced America (following the Treaty of Versailles) to recognize the vital security need for a national improved road system.

workforce roles and norms): Lynn Dumenil, *The Second Line of Defense: American Women and World War I* (Chapel Hill: University of North Carolina Press, 2017). For the impact of WWI on the Progressive movement and the new international context in which reformers, see: Alan Dawley, *Changing the World: American Progressives in War and Revolution* (Princeton: Princeton University Press, 2003).

⁶⁵ David M. Kennedy, *Over Here: The First World War and American Society* (New York: Oxford University Press, 1980), 94

⁶⁶ Ronald Schaffer, *America in the Great War: The Rise of the War Welfare State* (New York: Oxford University Press, 1991).

During the war, American power consolidated by virtue of the need to organize many elements coherently and efficiently, and the story of how the Great War experimented with new forms of social and labor control and reformulated a state need not be fully articulated here.⁶⁷ Some of the programs that paralleled the BPR's growth and provided models of centralized control, however, are helpful to understanding the paradigm of federal growth. First, President Woodrow Wilson organized the Committee on Public Information in 1917 to shape public opinion in favor of the war. This concerted effort by the federal government ensured public endorsement for the larger role of the state. Second, the War Industries Board fundamentally transformed the potential of the state through its wartime actions: the WIB worked with companies to implement mass-production and increase efficiency, allocate materials and how they would be used across the country, deal with organized labor protests, and standardize national products. The War Industries Board filled a need for an agency to oversee the disparate mobilization efforts, and its model reflected that of the Bureau of Public Roads. Lastly, the government nationalized railroads and coal mines. They did this to ensure that transportation networks and resources served state security needs. These developments prompted the government to reflect on its relationship with private businesses and the government's fundamental role in operating transportation networks. Internally, then, mobilization catalyzed the rapid growth of a managerial state and wartime bureaucracy, paralleling and informing the developing highway bureaucracy.

⁶⁷ See: Kennedy, *Over Here*, 93-143; Schaffer, *America in the Great War*, 31-46; Robert H. Zieger, *America's Great War: World War I and the American Experience* (Lanham, MD: Rowman & Littlefield Publishers, 2001), 57-84.

Contemporaneous with the real growth of the state came a reckoning of the effects of a developed road system. America, analyzing the war from afar, recognized the importance of troop movement and transport and supply networks. In particular, the Somme campaign of 1916 brought this point to light: food could not be distributed efficiently, information could not be dispersed effectively, and troops could not move.⁶⁸ America learned Europe's battlefield lessons: roads mattered in defense. The fear of being attacked at home played into the argument to build roads (see Chapter Three). This further solidified a shift in how roads were discussed, for national defense became a rallying point and a constitutional and legal underpinning of the national road program. Furthermore, the troop movement in America that did occur during the war challenged American perceptions of what constituted a good road. The new heavy military trucks with large loads ruined much of the existing road infrastructure. This consequentially led to a greater call for standard road building practices with tested (and federally approved) materials and methods. The postwar road-building program now included "develop[ing] surfaces that could withstand heavy truck traffic," while creating a road system that served military needs and connected vital troop and supply points.⁶⁹

World War I unfolded as the BPR developed, and the war cemented the role that the federal government would play in national road building. In the years following the war, the Bureau of Public Roads even coordinated with the War Department to create a defense map. This map established military roads and offered the BPR a blueprint of

⁶⁸ Mark Whitmore, "Transport and Supply During the First World War," *Imperial War Museums*, accessed 8 November 2017, <http://www.iwm.org.uk/history/transport-and-supply-during-the-first-world-war>.

⁶⁹ Christopher Wells, *Car Country: An Environmental History* (Seattle: University of Washington Press, 2012), 84.

which would support effective troop movement and supply delivery. WWI revealed a need for roads and proved an effective model of centralized organization.

Federal Aid Act of 1921

In 1921, Congress passed another landmark federal aid act.⁷⁰ More than increasing the federal aid appropriation dramatically and cementing the highway bureaucracy's system of power and oversight, this act laid the foundation for a national system of interstate highways. While making available more funds, this act maintained the original 1916 statute that states needed to match federal funds. The original 1916 Act provided for \$75 million over five years, and the new iteration upped the government's investment to \$75 million for just fiscal year 1921-1922. Moreover, this law placed more stringent requirements on highway departments to conform to federal standards, and, again, every state modified its highway department and submitted a certificate to confirm its status. Within a year, the BPR approved the modifications of 36 states' highway commissions, while dictating the requisite changes for the rest of the states.⁷¹ According to this act, the BPR, along with individual states, would designate seven percent of a state's road mileage to be improved, with three percent being designated as "primary or interstate highways" and the other four percent being "secondary or intercounty highways." All federal aid went to the primary and secondary roads, creating a coherent and uniform highway development plan. Although state

⁷⁰ *An Act To amend the Act entitled "An Act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes," approved 11 July, 1916, as amended and supplemented, and for other purposes*, Public Law No. 87, U.S. Statutes at Large 42 (1921): 212-219.

⁷¹ Book of Certificates from States Submitted in Compliance with the Requirements of the Federal Highway Act, n.d., 530/22/14-15/7-1/Box 1592, BPR Series, RG 30, NARA-II.

actors controlled the other 93 percent of a state's roads, the state engineers often conformed to national standards regardless of financing due to the informational strength of the BPR system. Balancing state and federal power, this 93-7 program allowed local control for roads deemed less important to national welfare, while ensuring the roads that effectively united America's highway program received the most attention and money. As with the previous federal aid act, the Secretary of Agriculture held the final authority in all highway matters, including the approval of states' seven percent maps, reinforcing the model of a centralized and consolidated hierarchy. Intended to ensure uniformity and efficiency, this model brought states' plans together. This bill, the BPR publicity office later wrote, was "the most significant piece of Federal highway legislation in the history of the United States."⁷² As the structure and policy of the BPR coalesced between 1916 and 1921, MacDonald and his BPR cemented their position as the recognized leaders of road building throughout the nation.

The crafters of the Constitution established a dynamic balance of power that tilted back-and-forth between the states and federal government.⁷³ The highway bureaucracy and federal aid acts represent a shift in American federalism with greater power allotted to the federal government. In the debate over the 1921 legislation that expanded and strengthened the 1916 act, politicians and constituents recognized the unprecedented growth and centralization of power. During the House debate in 1921, Representative Samuel Rayburn, an ardent opponent to the new bill, warned his colleagues: "I am getting sick and tired of the Federal Government everlastingly sticking

⁷² Report on U.S. Bureau of Public Roads and Its Work, May 1, 1932, Box 8, Folder 40, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

⁷³ For a survey of American federalism, see Alison L. LaCroix, *The Ideological Origins of American Federalism* (Cambridge: Harvard University Press, 2011).

its hands into the affairs of my State and I am against any more building up of bureaus and of bureaucracy in Washington to reach out into the different States and tell the people of those States what they shall and what they shall not do.”⁷⁴ Despite objections such as these, Congress overwhelmingly passed the new highway act.

In his message to Congress early in that year, President Warren Harding declared definitively the principle of federal aid: “With the principle of Federal participation acceptably established, probably never to be abandoned, it is important to exert Federal influence in developing plans.”⁷⁵ With Harding affirming the precedent of federal aid for good roads, Congress maintained the principle in the 1921 legislation. Indeed, MacDonald viewed federal aid as a means to influence local decisions and processes. MacDonald told Congress: “The efforts of the Federal Government to assist in developing matters primarily of local interest, but which in the aggregate have a tremendous influence upon the national life and the advancement of the national standards have taken the form of Federal grants or Federal Aid.”⁷⁶ The 1921 act codified a principle of federal aid that allowed the highway bureaucracy to influence matters not directly under its jurisdiction.

One way in which the principle of federal power through financial aid manifested appears in the creation of the national highway map. Through the designation of primary and secondary roads in the seven percent system, the BPR exercised significant influence over the states. Although state highway commissions

⁷⁴ Representative Rayburn speaking on S 1072 on June 27, 1921, 67th Cong., 1st sess., *Congressional Record* 61, pt. 3:3087.

⁷⁵ Harding’s Message to Congress on June 27, 1921, 67th Cong., 1st sess., *Congressional Record* 61, pt. 3:3086.

⁷⁶ Letter to Congress on Federal Aid in Construction of Roads, “General Memoranda” Folder, 530/24/21/5/Box 6, BPR Series, RG 30, NARA-II.

submitted original maps for approval, district engineers and the BPR officials influenced the final accepted map. Explaining the provision of map approval to the district engineers, MacDonald opined: “The Bureau believes that the approval of the Federal Aid highway system is one of the most important duties ever entrusted to it. The approval ... will have its effect in fixing particular routes and so determining the system.”⁷⁷ And the BPR took its duty to modify and approve maps seriously, thereby gaining immense influence over state plans. In Wyoming, for instance, the BPR and Wyoming engineers went back-and-forth for months before the state’s federal aid map was approved. Once it was approved by the federal government, the Wyoming highway system boomed. In accordance with federally approved locations and standards mandated through the use of federal funds, Wyoming completed 5,984.9 miles in 1921 5,435.6 in 1922. This represented a dramatic shift from the mere 1,531.3 total miles improved prior to the federal aid program funding and oversight.⁷⁸

The BPR worked with individual states on maps with the goal of finalizing a national interstate highway system. Finally, in November 1923, the Department of Agriculture approved and published a complete map of the federal aid highway system.⁷⁹ This complete 1923 federal system comprised of approved state maps represented the vision of the federal highway leadership. At the beginning of the map planning and approval process in 1921, MacDonald informed his engineers that “local conditions should not be allowed to crowd out other considerations.” Instead,

⁷⁷ Memorandum to all District Engineers, December 2, 1921, “Memoranda to District Engineers May 5, 1921 – Jul 24, 1922” Item, 530/24/21/5/Box 2, BPR Series, RG 30, NARA-II.

⁷⁸ Table of Federal Aid Road Mileages, n.d., “Wyoming General 1922 and 1923” Folder, 530/22/53/7/Box 3167, BPR Series, RG 30, NARA-II.

⁷⁹ “Annual Report to Congress, Required by Sec. 19 – Act of Nov. 9, 1921, for Fiscal Year 1924” Item, 530/B/1/3/Box 1, BPR Series, RG 30, NARA-II.



Figure 1.3: In 1923, the USDA approved the first complete national highway map. This federal aid system map represents the aggregation of state route maps, which the USDA informed and approved. Source: Original FAHS Nov. 1923, Folder 4, Series Maps of Highway System, RG 30, NARA-II.

MacDonald asserted: “the Bureau expects careful scrutiny given to all Federal Aid projects to the end that we may secure the best locations available.”⁸⁰ This policy had grown from a set of priorities MacDonald’s predecessor, Logan W. Page, issued to all state highway engineers, including Priority No. 2, which, as he succinctly summarized to many interested lobbyists, dictated that: “Nation as a whole must be considered before the community.”⁸¹

The immense project of reviewing, modifying, and approving state maps gave the federal highway officials great influence, and it also presented an opportunity to expand the highway bureaucracy. The number of civil service employees working for

⁸⁰ Memorandum to all District Engineers, July 11, 1921, “Memoranda to District Engineers May 5, 1921 – Jul 24, 1922” Item, 530/24/21/5/Box 2, BPR Series, RG 30, NARA-II.

⁸¹ Policy is articulated in letters throughout 1916-18 in “Federal Aid System—1918-17” Item, 530/22/23/6/Box 1956, BPR Series, RG 30, NARA-II.

the bureau grew by almost 75 percent (from 403 to 690) by June 1923 from the number employed when Congress passed the 1921 highway act, not to mention the staff members and laborers employed outside the auspices of the civil service.⁸² Reviewing the first years of the federal aid program, the Department of Agriculture declared: “The most outstanding accomplishments have been the designation of a Federal aid highway system upon which all Federal funds must be spent, the establishment of State highway departments, and the efficient cooperation that has been developed and maintained between the Department of Agriculture and these State departments.”⁸³ The process of overseeing and managing the states catalyzed the growth of this model of a far-reaching federal highway bureaucracy.

As President Harding saw it, “Our highways are built by and under the States, with such Federal participation as is calculated to assure continuity and articulation.”⁸⁴ This cooperation, however, was “set up to accomplish certain definite Federal objectives and purposes.”⁸⁵ One of the stipulations of the 1921 act dictated that: “All highways constructed or reconstructed under the provisions of this Act shall be free from tolls of all kinds.”⁸⁶ This national directive intended public works to be available for public use without hindrance or fee. Beyond overpowering states, the federal government was

⁸² Table from FY 1920, “Gen. Statement Showing the total number of Employees in Each grade Employed in the Dist. Offices and those in the main office engaged on fed. Aid years – 1920 & 1921” Folder, 530/22/23/4/Box 1940, BPR Series, RG 30, NARA-II. Itemized list of Bureau of Public Road Employees Paid from Federal Aid, June 30, 1923, “F.Y. 1923” Item, 530/B/1/3/Box 1, BPR Series, RG 30, NARA-II.

⁸³ “Annual Report to Congress, Required by Sec. 19 – Act of Nov. 9, 1921, for Fiscal Year 1924” Item, 530/B/1/3/Box 1, BPR Series, RG 30, NARA-II.

⁸⁴ Paper entitled “Correlating State and National Highway Programs” from the Convention of Chambers of Commerce of Kansas, Jan. 23, 1925, Box 6, Folder 61, Series 1: Personal, THM Collection, Cushing Library, TAM.

⁸⁵ Ibid.

⁸⁶ *An Act To amend the Act entitled “An Act to provide that the United States shall aid the States in the construction of rural post roads, and for other purposes,” approved 11 July, 1916, as amended and supplemented, and for other purposes*, Public Law No. 87, U.S. Statutes at Large 42 (1921): 212-219.

stepping into the traditional role of businesses and corporations. Free roads spelled the end of for-profit-by-tolls road-building companies. When constituents called for free roads to compete with private toll roads, the federal government responded. It directly challenged private corporations by making a national system of free roads. For example, Texas and Oklahoma, with the consent and financing of Congress, built a bridge over the Red River just about a mile from a toll bridge. Although Representative Cartwright, who was behind this bridge, received some protest to the new bridge (mostly from those invested in the toll bridge or those who wanted the bridge closer to their farms), he had the backing of the majority of Texans and Oklahomans; the Texas Commissioner of Labor assured him, “Fully ninety-five per cent of the people of Texas affected are in sympathy with the freeing of the bridges.”⁸⁷

In the fight for the Red River bridges, Cartwright and the Roads Committee made a larger point about the necessity of only having continuous free highways throughout the United States. “I believe that wherever our public highways go,” Cartwright argued, “free bridges should go, because they are truly a part of the highway. The day of toll bridges are gone forever. This is a progressive age.” Invoking the language of Progressivism, Cartwright further expanded the impact of the federal government by competing with private enterprise. He asked the Committee on Interstate and Foreign Commerce: “Is it possible that these toll bridge companies who have been well paid can hold out and throttle this program of road construction at the expense of the general public?”⁸⁸ The answer was definitely no. Between the work of the BPR and

⁸⁷ Correspondence from Chas. McKemy to Wilburn Cartwright, Dec. 16, 1929, Box 6, Folder 26, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

⁸⁸ Speech on “FREE BRIDGES” by Wilburn Cartwright, n.d., Box 6, Folder 29, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

Congress' purse, the 1921 legislation instituted a policy of providing this public good. Finally, by the mid-1930s, states, with the support of the federal government, controlled all toll crossings on federal aid highways. Reflecting on this program in 1932, MacDonald declared: "Federal assistance made possible and created a nation-wide highway plan."⁸⁹ He continued with his musings about the future of federal aid: "Always, probably, some appropriation for federal aid, or certainly federal inspection and supervision of highways, will be needed."⁹⁰ The government's influence, as seen through the highway program, had instituted a permanent need for federal guidance and the means to institute federal directives and standards throughout the country.

Expansion of Constitutional Authority

The road program proved effective and popular, and thus the people found legal mechanisms to justify it. The Constitution grants Congress the power "To establish Post Offices and post Roads."⁹¹ Indeed, the 1912 appropriation bill empowered road building specifically for post roads, and in 1916, the federal aid "provide[d] that the United States shall aid the states in the construction of rural post roads and for other purposes."⁹² By 1921, however, the argument shifted almost entirely away from post roads. Politicians argued for roads on the grounds of fostering rural social welfare, connecting farms to markets, promoting American tourism, bolstering the national defense, developing

⁸⁹ Report on What Federal Aid Has Done For America's Highways, Sep. 10, 1932, Box 11, Folder 14, Series 2: Inter Agency, THM Collection, Cushing Library, TAM.

⁹⁰ Report on What Federal Aid Has Done For America's Highways, Sep. 10, 1932, Box 11, Folder 14, Series 2: Inter Agency, THM Collection, Cushing Library, TAM.

⁹¹ U.S. Const. art. I, § 8.

⁹² *An Act To provide that the United States shall aid the States in the construction of rural post roads, and for other purposes*, Public Law No. 156, U.S. Statutes at Large 39 (1916): 355-359.

public school bus routes, and providing for the millions of automobiles now in the country, among other reasons.

Politicians no longer relied on a strict interpretation of the Constitution. Indeed, even postal service workers did not receive priority for road requests. In fact, in 1930 R.E. Lawrence, Postmaster of Moorhead, Montana, wrote his senators and BPR officials requesting the government fund Star Route 63356 from Broadus, MT to Arvada, WY. The senator pushed the buck along to the BPR to avoid disappointing a constituent, and Thomas MacDonald informed Lawrence that “it does not seem possible that hope can be held out for any assistance from Federal or State funds in the near future.”⁹³ MacDonald settled the dispute by noting that the BPR policy attempted to do the greatest good for the greatest number of people, which did not *ipso facto* mean post roads. The turn away from a strictly postal justification had been long building: just after the passage of the 1916, the federal highway office’s Chief Engineer laid out a policy for approving road in which “it [was] not necessary that mail shall be carried on the road throughout its entire length.”⁹⁴ This represents a fundamental shift in American thought; the interpretation of the Constitution expanded to grant the government power to build general welfare roads, not just post roads. Moreover, because the federal government approved or rejected all state road applications, the justifications for rejection further reveal the shift away from post roads. In the rejection of Colorado’s proposed construction project around Otero Creek, for example, the BPR rejected the proposal

⁹³ Correspondence from Postmaster R.E. Lawrence to Thomas MacDonald, May 12, 1930, “January—December 1930” Folder, 530/22/53/6/Box 3162, BPR Series, RG 30, NARA-II.

⁹⁴ Circular from Office of Public Roads and Rural Engineering Chief Engineer to all District Engineers, March 2, 1917, “Letters to District Engineers from January 1917 to April 30, 1919, incl.” Item, 530/24/21/5/Box 1, BPR Series, RG 30, NARA-II.

because the road is not to “be used for military movements of any considerable magnitude nor is there any indication that there is any highway traffic flow emanating from the industries . . . in the vicinity of the proposed improvement.” Similarly, the BPR laid out its priority of social welfare in its comments on Kentucky’s application, noting the “highly desirable” component of the road that provides access to the Darnell General Hospital.⁹⁵ With the constitutional duty of post roads omitted, road justification shifted to the broader arguments of interstate commerce, general welfare, and national defense. These shifts, it must be understood, were sanctioned by the states: the states allowed the federal government to construct roads in a new political bargain in which both sides benefitted, ultimately providing the public with a national system of improved roads.

After abandoning the façade that roads fulfilled the Constitutionally enumerated obligation of the Postal Clause, politicians and highway advocates sought new justification for road building in the Constitution. Despite this liberal application of these broad commerce, defense, and general welfare clauses, politicians simply found arguments that fit a popular program they sought to support. As one politician reminded Congress: “The General Government has constitutional power to construct and maintain post roads, military roads, and roads used in the transportation of interstate commerce.”⁹⁶ However, opponents of the expansion of the governmental responsibility cited Constitutional authority as limited only to those powers enumerated. For example, Representative Joseph Walsh⁹⁷ declared: “it is no part of the Federal Government’s duty

⁹⁵ Correspondence from J.T. Veshell, August 14, 1942, “Kentucky – Disapproval” Folder, 530/23/33/3/Box 225, BPR Series, RG 30, NARA-II.

⁹⁶ Representative Williams speaking on HR 7617 on January 22, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1280.

⁹⁷ When the Committee reported the 1916 Rural Post Roads Act to Congress, their decision was unanimous with the exception of Rep. Walsh (Mass.), who objected primarily on the grounds that the federal government lacked the authority to build roads. Walsh’s secondary objection rested on his belief

or obligation to construct highways in whole or in part for the States.” When asked how the roads differed from the railroads and canal projects and subsidies that merited the interstate commerce application, Walsh broke down the analogy. “This bill,” Walsh argued in 1916, “is not confined to any particular road used in interstate commerce . . . It is not to be directed to thoroughfares from one State into another, but any little road, if it starts nowhere and goes elsewhere, can receive aid.”⁹⁸ Good Roads politicians, however, won.

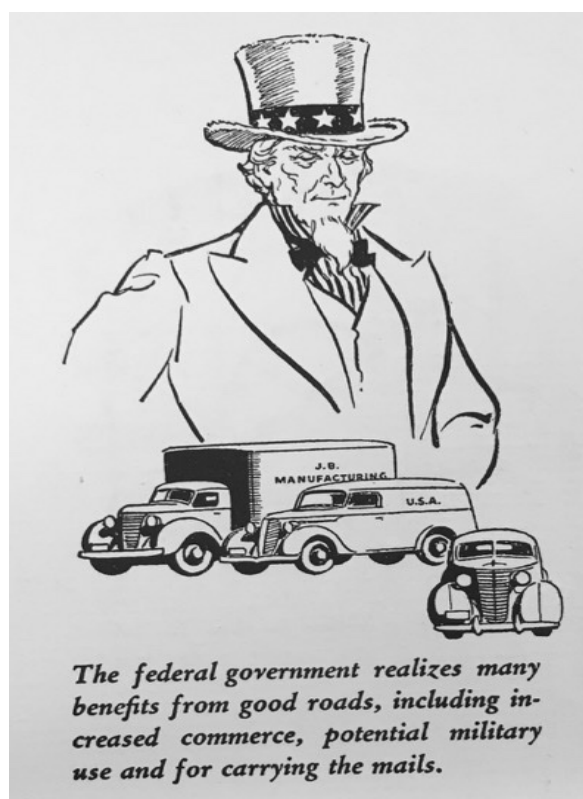


Figure 1.4: The federal government asserted new constitutional justifications to secure responsibility to build roads throughout the nation. This cartoon, printed in an American Automobile Association pamphlet, shows the way private organizations supported the government and promoted its reasoning. Source: Folder 2, Box 10, Carl Albert Center.

that this bill inequitably favored rural farm interests, forcing his urban district to subsidize unnecessary internal improvements.

⁹⁸ Representative Walsh speaking on HR 7617 on January 19, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1275.

Politicians relied on overwhelming popular support to justify their broad interpretations of their authority. Representative Thetus Sims justified his “aye” vote by declaring: “I hope and pray that however much you may love the Constitution ... that we will not let a constitutional doubt stand in the way of that which will benefit every section of the country in the United States.” Representative Sims continued by declaring that the Courts would eventually resolve the question of authority, but “execution in the meantime will have redounded to the greatest general public good.”⁹⁹ In addition to counting on public support, highway advocates re-interpreted the definition of a road. The “definition of the kind of roads that can be constructed [had] been greatly broadened” in the 1920 roads appropriation bill, as the Secretary of Agriculture noted.¹⁰⁰ The post-war roads bill Congress passed elaborated on, and expanded, the definition of “rural post roads”: “any public road a major portion of which is now used, or can be used, or forms a connecting link not to exceed ten miles in length of any road or roads now or hereafter used for the transportation of the United States mails.”¹⁰¹

Rather than legally codifying a new road usage, the justification and rhetoric used increasingly was broadened, then massaged to fit into established legal frameworks. The public desire for good roads allowed for this cultural and popular re-writing of the Constitution.¹⁰² By 1917, the American Automobile Association informed

⁹⁹ Representative Sims speaking on HR 7617 on January 22, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1379.

¹⁰⁰ Correspondence from Secretary of Agriculture D.F. Houston to A.P. Sandles of *The Toledo Blade*, May 9, 1919, “Letters to District Engineers from 5/1/19 to 5/27/20” Item, 530/34/32/5/Box 1, BPR Series, RG 30, NARA-II.

¹⁰¹ *An Act Making appropriation for the service of the Post Office Department for the fiscal year ending June 30, 1921, and for other purposes*, Public Law 66-187, U.S. Statutes at Large 41 (1920): 1-32.

¹⁰² In a Supreme Court decision in 1907, the Court upheld Congress’ constitutional power to build interstate highways. While this ruling laid a precedent for future highway arguments premised on the Commerce Clause, *Wilson v Shaw* differs in two ways: first, the case pertained primarily to canals as the interstate highways; second, the 1916 highway act designated states to create state highway maps,

Logan W. Page: “We are confident that public opinion will uphold an exceedingly liberal interpretation of the Road Act.”¹⁰³ Completing the attitudinal shift away from post roads as defined in the original 1916 federal aid act and the Constitution, the United States Solicitor offered a new definition of highways in a February 1924 memorandum. Turning away from rural post roads, the Solicitor informed highway engineers and advocates: “I am of the opinion, therefore, that this Department is authorized to cooperate with the States in the construction of highways or streets within a municipality.” The federal government thus took on the responsibility for constructing highways and streets, as opposed to the strict role of building rural post roads. To ensure no ambiguity existed on the evolving role of the government, the Solicitor concluded his integral memorandum by stating: “Anything which I heretofore have advised with reference to this question which is in conflict with the opinion I now expres [sic] is revoked.”¹⁰⁴

Petitions in favor of road building echoed calls for federal vision and control, such as the Federal Highway Council called for when advocating for the 1921 highway act: “Such development is not a State function. It must come under the province of the Federal government.”¹⁰⁵ Organizations and individuals echoed the calls of the Federal Highway Council: Americans sought an organized, efficient system run through the

which were then encompassed into an interstate system, shifting the basis of the road away from the 1907 ruling. See, *Wilson v Shaw*, 204 U.S. 24 (1907).

¹⁰³ Correspondence from Executive Chairman of American Automobile Association to L.W. Page, December 18, 1917, “Federal Aid System—1918-17” Item, 530/22/23/6/Box 1956, BPR Series, RG 30, NARA-II.

¹⁰⁴ Circular to all District Engineers of Bureau of Public Roads from Chief Engineer, March 8, 1924, “1933-17” Folder, 530/22/22/1/Box 1870, BPR Series, RG 30, NARA-II.

¹⁰⁵ Petition from Federal Highway Council to Rep. Charles E. Fuller, February 6, 1920, “HR66A-D29: S.1309, 3982, 2572” Folder, Box 400, “Records of the U.S. House of Representatives, 66th Congress, Papers Accompanying Specific Bills and Resolutions” Series, RG 233, NARA.

federal highway bureaucracy, regardless of legal authority or precedent. Indeed, the highway bureaucracy changed American federalism in two ways: re-interpreting the broad clauses of the constitution and shifting power from the states to the federal government.

The new rhetoric surrounding highways and the broadened legalist underpinnings fed into legitimation of the federal government's new responsibility. Historian Donald Worster defines the process of "legitimation" as "the transforming of what might be regarded with skepticism or hostility into something acceptable, even honorific." Worster builds on Max Weber's definition of legitimation as the process of establishing, without precedent or tradition, the custom of something rational and proper.¹⁰⁶ As states called on the government and the people responded positively, the government's role in consolidating and centralizing highway projects solidified. This federalized road building process introduced citizens to the mechanisms, products, and potential of the national state apparatus. Although the early twentieth century witnessed moderate federal intervention in daily life, the highway bureaucracy dramatically altered understandings of federal power. The most intimate interactions individuals had with the federal government, aside from the postal service, manifested in the Food and Drug Administration (est.1906), the federal income tax (est. 1913), the Federal Trade Commission (est. 1914), prohibition and its regulation (Eighteenth Amendment and National Prohibition Act both est. 1919).¹⁰⁷ The roads pushed the conversation of the

¹⁰⁶ Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1992), 114, 356fn5.

¹⁰⁷ For a brief introduction to the growth of the federal regulatory apparatus in the development of the state, see: Lisa McGirr, *The War on Alcohol: Prohibition and the Rise of the American State* (New York: W.W. Norton & Company, 2016), especially 61-62.

scope of the federal government beyond that of a regulatory apparatus; the government's legitimated and growing scope came in the form of infrastructural development and labor opportunities. This was a self-perpetuating process: as the government built more roads, the people legitimated the role.

The Politics of Good Roads

The public overwhelmingly supported road building, and politicians capitalized on this general support. The people approved of the shift in power from states to the government. In Wyoming, for instance, the public overwhelmingly supported a \$1.8 million bond measure in November 1921 by a margin of 21,792 in favor to 4,927 against.¹⁰⁸ Similarly, California authorized a \$40,000,000 bond measure in 1919 with 196,084 votes in favor and only 27,992 against; Illinois passed a measure in 1918 for \$60,000,000 by a vote of 661,815 to 154,396.¹⁰⁹ These voters approved ceding regulatory and oversight power to the federal government by way of the strings attached to the federal aid legislation they sought. As Representative Martin Madden said in 1916 of the question of authority: “But whether we have the constitutional right or not, it seems to me that the time has come when the interests of the public everywhere are best served” with this federal aid bill.¹¹⁰ With such overwhelming public support for road building, politicians—at the national, state, and local levels—used road building to gain power, thus consolidating political power in the hands of those with access to road

¹⁰⁸ State of Wyoming's Secretary of State's Certificate of Vote, November 8, 1921, “Wyoming General 1919---1920---and 1921” Folder, 530/22/53/7/Box 3167, BPR Series, RG 30, NARA-II.

¹⁰⁹ “Why The People Built Our Highways” informational packet written by Joseph B. Eastman, 1933, “Condition and % of State Highway Completion” Folder, 530/24/22/1/Box 2, BPR Series, RG 30, NARA-II.

¹¹⁰ Representative Madden speaking on HR 7617 on January 21, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1355.

decisions. When states finalized and submitted their road maps in the federal aid process, local road organizations, motorists, businesspeople, and farmers all petitioned government officials to alter the routes to their benefit. Influence in the road program became political capital, and politicians wielded it in elections.

The political capital from road authority functioned on two levels: the BPR wielded ultimate authority while local politicians campaigned on their ability to secure

GOOD ROADS FOR EVERY COUNTY

THE Federal Government already has appropriated nearly six million dollars to aid Alabama in the construction of good roads.

To obtain Federal aid, Alabama must put up an amount equal to the Federal appropriations. But, under existing conditions, the state cannot make such appropriation because of lack of funds in the treasury. The present Federal appropriation lasts for only three years, and, if not used in that time, goes back into the Federal treasury.

Other states are taking advantage of this opportunity whether Alabama does or not. Alabamians, if they let their chance slip by, will have the satisfaction of knowing that they are helping to pay in Federal taxes for the good roads and increased commercial prosperity of other states, without reaping any benefit themselves.

The \$25,000,000 bond issue will enable Alabama to cover Uncle Sam's offer dollar for dollar, as it is offered.

State and Federal roads will enable the counties to spend their money on the OTHER ROADS that are now neglected. The man who lives away from the big, main highways to be built from county seat to county seat will get direct benefit from the bond issue roads, whether he uses them or not.

ELECTION FEBRUARY 16, 1920

GOOD ROADS FOR EVERY COUNTY

THE GOOD OLD-FASHIONED WAY

HEY THERE—
WAKE UP!

ALABAMA HAS THE CHANCE NOW TO BUILD AND MAINTAIN GOOD ROADS IN EVERY COUNTY—WITHOUT ANY EXPENSE TO THE COUNTIES; WITHOUT INCREASING TAXES ON PROPERTY; WITHOUT RAISING THE ASSESSED VALUE OF PROPERTY.

ELECTION FEBRUARY 16, 1920

Issued by
ALABAMA HIGHWAY IMPROVEMENT ASSOCIATION
F. J. CROOK, President
Montgomery

Copyright Registered at Exchange Road

Figure 1.5: Americans supported good roads. States and localities put up money to match the federal government and assent to the terms of the federal aid acts. Ahead of a vote for a \$25 million bond in Alabama, the Alabama Highway Improvement Association issued this pamphlet to drum up support. Source: NARA-II 530/22/23/6/1955.

roads for the community. As the funding came from the national government, the BPR exercised its immense political capital to gain influence over state decisions by privileging certain politicians and companies. In addition to route selection as a means to achieve power, road building required masses of laborers, which became another form of political power. In addition to the growth in civil service jobs, companies hired many men to work on the roads; over 85% of the road funding went directly to the salary of an administrator or laborer, as opposed to material or transportation costs. Successful politicians recognized the myriad benefits of bringing roads to their communities, and they campaigned on their ability to secure roads.

Scholars have observed that New Deal public works codified a political economy that “foster[ed] economic development through public works construction.”¹¹¹ While the New Deal expanded the political economy of public works, the politicians and technocrats involved in the early road building process recognized—and employed—the power of patronage and route-creation. Even in the “transition period from [World War I] to peace ... the vigorous prosecution of all public improvement work” became a staple of economic development and employment. In the unevenly prosperous 1920s, then, the public work of highway building insured employment, particularly the employment of the unskilled.¹¹² After the War Industries Board lifted its regulations, President Woodrow Wilson articulated a policy of economic development through public works that established a precedent for New Deal programs; Wilson declared: “It is important not only to develop good highways throughout the

¹¹¹ Jason Scott Smith, *Building New Deal Liberalism: The Political Economy of Public Works, 1933-1956* (Cambridge: Cambridge University Press, 2006), 234.

¹¹² Circular to State Highway Departments from L.W. Page, November 25, 1918, “1933-17” Folder, 530/22/22/1/Box 1870, BPR Series, RG 30, NARA-II.

country as quickly as possible, but it is also at this time especially advisable to resume and extend all such essential public works, with a view to furnishing employment for laborers who may be seeking new tasks during the period of readjustment.”¹¹³ Although the federal government had not expanded to the point where it directly employed masses of unskilled laborers (as it would in the 1930s), federal politicians determined policy and appropriations based on indirect hiring, thereby accruing significant control of economic development. Politicians justified highway policy on the basis of the political economy.

The Highway Bureaucracy Model in the Depression Era

In the midst of the Great Depression, President Roosevelt and other politicians capitalized on the coalescing road program. The precedent had long been established that road building could be used as a form of employment in the political economy. With the mass unemployment of the 1930s, came the realization of the growing bureaucratic ideal of the 1910s and 1920s. Many scholars have observed the tremendous growth of the federal government’s reach and influence during the New Deal, and this reach was centered on a road building program. Road building was a central component to all government employment programs, including the National Industrial Recovery Administration, Public Works Administration, and Works Progress Administration. The Hayden-Cartwright Act of 1934, “To increase employment by authorizing an

¹¹³ Correspondence from Woodrow Wilson to Secretary of Agriculture, November 22, 1918, “1933-17” Folder, 530/22/22/1/Box 1870, BPR Series, RG 30, NARA-II.

appropriation to provide for emergency construction of public highways and related projects,” especially spurred America’s New Deal highway-focused program.¹¹⁴

Throughout the 1920s, the processes of road building became formalized, and the BPR and federal bureaucracy grew and accrued power. States, however, still maintained independence, for they had very little formal oversight regarding road projects not associated with federal aid projects, aside from informal influence of engineers and education. However, the government used the threat of withholding federal money for roads to coerce state policy and legislature. During the Depression, many states diverted taxes and fees received from automobile-related collections, such as the gas tax or registration fee.¹¹⁵ The BPR did not like this practice; highway engineers believed that what was collected from automobile activities should be re-invested in improving the infrastructure. Indeed, a 1935 study by the Bureau of Public Roads found that 15.54% of all states’ highway funds were diverted; this ranged from West Virginia only diverting 0.02% to New York diverting 58.67%.¹¹⁶ Therefore, Section 12 of the Hayden-Cartwright Bill of 1934, which apportioned \$200 million in federal funds to be used under the provisions of the National Industrial Recovery Act, stipulated: “Since it is unfair and unjust to tax motor-vehicle transportation unless the proceeds of such taxation are applied to the construction, improvement, or maintenance of highways,” states that divert funds could lose up to one-third of the amount to which

¹¹⁴ *An Act To increase employment by authorizing appropriation to provide for emergency construction of public highways and related projects, and to amend the Federal Aid Road Act, approved July 11, 1916, as amended and supplemented, for other purposes, Public Law 393, U.S. Statutes at Large 73 (1934): 993-995.*

¹¹⁵ By 1929, every state collected a gasoline tax. The revenue from automobile-related taxes was a source of government revenue that only negligibly declined during the Great Depression.

¹¹⁶ Report on Diversion of Motor-Vehicle Revenues by States in 1935 in the Remarks of Hon. Robert T. Secrest in the Congressional Record, Apr. 14, 1937, Box 10, Folder 2, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

the state would be entitled.¹¹⁷ With this threat, states complied. Federal legislation, again, dictated how states could spend their money by threatening the forfeiture of aid, ending the “indefensible practice of misappropriating their own gasoline and other motorists’ special taxes,” according to the opinions of federal lawmakers.¹¹⁸ In 1937 New Jersey became the first state to be penalized under this section of the Hayden-Cartwright Act. The Department of Agriculture withheld \$250,000 from New Jersey’s federal aid road funds.¹¹⁹ Shortly thereafter, New Jersey acquiesced. The highway bureaucracy capitalized on Depression-era politics, expanding their reach and asserting national control, while serving as a model agency for other programs and initiatives.

Conclusion

In January 1916, a gentleman from Minnesota wrote to the Department of Agriculture complaining of his isolation due to the lack of a road.¹²⁰ In January 1916, however, the Department of Agriculture could do little for Mr. William C. Hatcher. The BPR informed Hatcher: “We have your letter ... in regard to the difficulty you are having with the county commissioners in regard to the opening of a road to your place. The Federal Government has no authority in this matter.”¹²¹ However, that soon

¹¹⁷ *An Act To increase employment by authorizing appropriation to provide for emergency construction of public highways and related projects, and to amend the Federal Aid Road Act, approved July 11, 1916, as amended and supplemented, for other purposes*, Public Law 393, *U.S. Statutes at Large* 73 (1934): 993-995.

¹¹⁸ Statement by Congressman Cartwright, n.d., Box 10, Folder 6, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

¹¹⁹ Press Release of United States Department of Agriculture: “NEW JERSEY PENALIZED \$250,000 FOR DIVERTING MOTOR VEHICLE REVENUES,” August 10, 1937, “1937—File Copies” Folder, 530/24/22/1/Box 8, BPR Series, RG 30, NARA-II.

¹²⁰ Correspondence from William C. Hatcher to L.W. Page, January 3, 1916, “Road Legislation—July 1, 1915-June 30, 1919” Folder, 530/22/21/3/Box 4262, BPR Series, RG 30, NARA-II.

¹²¹ Correspondence from P.S.J. Wilson to William C. Hatcher, January 15, 1916, “Road Legislation—July 1, 1915-June 30, 1919” Folder, 530/22/21/3/Box 4262, BPR Series, RG 30, NARA-II.

changed. With the passage of the 1916 federal aid act in July and its successive related acts, the federal government took authority for road construction. By the 1930s, the federal road bureaucracy responded to the clamor for good roads by creating a new balance of federalism. The government heeded the call by consolidating and centralizing the road-building process. The highway bureaucracy used its influence in the education system and its coercive power of federal aid to shape a national highway system.

At the beginning of his presidency in 1929, Herbert Hoover organized a group of the nation's pre-eminent scientists to undertake a comprehensive national survey. After years of study, these observers produced a volume over 1,500 pages entitled *Recent Social Trends in the United States*. In their discussion of the growth of governmental functions, the study concludes: "the ever moving currents of social and economic opinion tend to produce an unending series of changes in the number and character of duties imposed upon the administration by the lawmaking branch, acting in its capacity as interpreter of the public will."¹²² Indeed, the public had made its will clear, and the legislators responded by enshrining a national policy of road building. In its discussion of the federal-state cooperation, the Hoover study determined "the guidance supplied by federal highway engineers has contributed uniformly to efficiency and economy and to the widespread adoption of the most effective techniques of construction and maintenance."¹²³ The authors recognized how effectively the federal government, through expertise and information, guided road production.

This federal bureaucracy grew prior to the New Deal. While the New Deal represents the culmination of an active and responsive government, the highway

¹²² *Recent Social Trends in the United States*, 1274.

¹²³ *Ibid.*, 1298.

program—as facilitated by the 1916 and 1921 federal aid acts—developed a distinctive hierarchical model that the New Deal could follow. As states and citizens called for development, the federal government organized efforts under a single office. To enact this policy, legislators expanded their interpretation of the constitution, applying existing frameworks to the increasingly popular cause of good roads. With the clamor for good roads and the trend towards an expanding government, a Representative told his colleagues in 1916: “This objection has long since been abandoned, and if the gentleman was not such a belated representative of an ancient school of strict constructionists, he would know that in this House at least, the time has passed when it is necessary for an advocate of a measure of this character to present arguments for his contention that there is full warrant of constitutional authority for Federal appropriation.”¹²⁴ The public called for good roads, and politicians massaged federal authorizations to satisfy the good roads movement.

Walter Lippman’s call for a government run by “intelligence bureaus” was realized in Thomas MacDonald’s Bureau of Public Roads. While six presidents came and went over a span of over 30 years, Thomas MacDonald remained, for he was the one with a vision for the highway program, the knowledge to enact the vision, and the bureaucratic expertise and power necessary. Working with organizations, experts, and an ever-increasing budget, Thomas Macdonald and the BPR epitomized an age in which experts wielded serious power. Through his long-term planning and apolitical stature as an engineer, MacDonald helped spur an age in which the government accrued great responsibility and responded to the public. By the end of MacDonald’s tenure, however,

¹²⁴ Representative Browne speaking on HR 7617 on January 19, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1280.

Americans realized the extent to which the model of the BPR had spread throughout Washington's bureaucracy, rooted in the Progressive Era and culminating in the New Deal, and some Americans came to resent the power of bureaucrats.¹²⁵ By this time, though, power had been consolidated and entrenched in Washington, D.C. "The Highway of Tomorrow" was to be built under the new expert-organized method: "Each class of thoroughfare from the heavy duty, high speed super-highway to the little used trail leading to the individual farmer's gate, must be scientifically planned, adequately improved, and properly correlated to form a unified, safe and economical transportation system. This requires planning—and lots of it."¹²⁶ With its power and resources, the BPR instituted a policy of standardization and uniformity.

¹²⁵ See, for example, David K. Johnson, *The Lavender Scare: The Cold War Persecution of Gays and Lesbians in the Federal Government* (Chicago: The University of Chicago Press, 2004), 92-99, which discusses the political and popular reactions against the bureaucratic influence and power in Washington, D.C., examined in gendered terms; and Richard Hofstadter, *Anti-Intellectualism in American Life* (New York: Vintage Books, 1962), who delves into the anti-intellectual impulses in America which argue against an intellectual-led society as un-democratic.

¹²⁶ "THE HIGHWAY OF TOMORROW," April, 14, 1937, Box 10, Folder 2, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

Chapter II: The Power of Expertise and Standardization

“In our opinion the findings and conclusions of the Bureau of Public Roads of the United States Department of Agriculture in this particular filed should be regarded as conclusive. It is an official governmental bureau, free from partisan or special interest ... Engineers, whose duty is to design and construct the roads, can discharge their responsibility to the people only by following scientific practices developed by experience and research.”

Why The People Built Our Highways, 1933¹

The federal highway bureaucracy accrued power by standardizing the country’s road program. Professional experts, trained and educated engineers, promoted that nationally uniform and coherent highway system. Because politicians and the public viewed engineers as experts, these experts could dictate standards at the local, state, and national levels. Engineers asserted their allegedly apolitical expertise to centralize the decision-making processes and to guide highway development.

In addition to instituting uniform technical specifications, highway leaders attempted to push model road and safety legislation in every state. This model legislation, paired with aesthetic uniformity through signage, landscaping, and numbering, provided the highway leadership with another means to centralize the efforts traditionally conducted by local organizations and interests. The public called for safer highways, a nationally unified system, and adequate construction processes and materials, and the BPR responded to this public clamoring by asserting its power in a centralized hierarchical system. The agency needed to grow to accomplish its legal and popular mandate, and the BPR presents an example of an agency’s responsible and effective development.

¹ “Why The People Built Our Highways” informational packet written by Joseph B. Eastman, 1933, “Condition and % of State Highway Completion” Folder, 530/24/22/1/Box 2, “Bureau of Public Roads Classified Central File 1912-1950” Series, RG 30, NARA-II (hereafter: BPR Series, RG 30, NARA-II).

Through the processes of standardization, the highway bureaucracy created a *de facto* national highway system, despite their mandate to help states via a federal aid system. Until Congress passed the 1921 federal aid bill—and even to an extent after—a debate raged over whether America should implement a federal aid program or a national highway system.² On the one hand, supporters of the federal aid system touted local control and a balanced state-federal partnership as the primary benefits of the model. On the other hand, supporters of the national highway system argued that centralized control of the nation’s highway program provided uniformity, equity, and success across the nation.³

Although Congress ultimately favored federal aid to maintain a balance of power, the highway bureaucracy still accumulated power to encourage a national system. Rather than explicitly dictating the contours of the highway system at all levels, the federal government worked with states, industry, and engineers to accrue informal

² This debate was an explicit fight over state versus federal power. In the national highway system, which President Eisenhower ultimately saw enacted in 1956, the federal government took full control of the highway program and gave up the façade of working through the states. However, politicians in the 1920s sought a compromise in which they could stand behind the principles of balanced federalism. For petitions on both sides of the debate, see the collection, noting especially the letters from 1918 through 1921: “FAS – Dec. 1921 to Dec. 1925” Folder, 530/22/23/6/Box 1955, BPR Series, RG 30, NARA-II.

³ During this era, activists largely called upon local government agencies to take responsibility, not the national government. Indeed, the national government maintained a general policy of laissez-faire economics. However, during the period, Progressive reforms sought some federal regulation of industry; some regulation came through the court system, rather than through the legislative process. For local political activism in an international context, see: Daniel T. Rodgers, *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge: Belknap Press of Harvard University Press, 2000); for America’s Progressive reformers’ successes in conservation, see: Ian Tyrrell, *Crisis of a Wasteful Nation: Empire and Conservation in Theodore Roosevelt’s America* (Chicago: University of Chicago Press, 2015); for the Progressive realization of reforms proposed by Populists, see: Elizabeth Sanders, *Roots of Reform: Farmers, Workers, and the American State* (Chicago: University of Chicago Press, 1999); for a discussion of the political and culture environment of the 1920s, see: Lynn Dumenil, *The Modern Temper: American Culture and Society in the Twenties* (New York: Hill and Wang, 1995); for an account of Hoover’s political and economic philosophy on the role of limited government intervention, see: Glen Jeansonne, *The Life of Herbert Hoover: Fighting Quaker, 1928-1933* (New York: Palgrave Macmillan, 2012); for the role of the courts in the Progressive era reform, see: Melvin I. Urofsky, “State Courts and Protective Legislation during the Progressive Era: A Reevaluation,” *The Journal of American History* 72, no. 1 (1985): 63-91.

power. Through both power by virtue of being the locus of centralized information and the power of legal mechanisms, the BPR engineers achieved their vision of uniformity under a national system. By December 1925, Thomas MacDonald confirmed, “This [federal aid] system constitutes in effect a National system of highways.”⁴ The BPR consolidated power and influence to enact a national highway system, while maintaining the veneer of co-equal state-federal cooperation. This dual process allowed the national state to effectively develop a rational highway system for the country while states and localities still maintained enough control to reap political benefits. Through processes of technical, legal, industrial, and mapping standardization, the highway bureaucracy focused on uniformity in an interstate system on which the greatest number of Americans could depend. Indeed, by 1925, the system embodied national, not local, priorities: as the 187,000-mile federal primary interstate system had been laid out, it connected nearly every city in America with a population of 5,000 people or more. The engineers created a national system under the auspices of a federal aid program.

Although Americans generally pushed back against the idea of a coercive and expansive federal government in the 1910s and 1920s, politicians and citizens alike still called on the federal government to articulate and guide a national road system of sound quality. Ultimately, the BPR presented itself as an agency that helped the most people possible. Indeed, through the growth of a centralized bureaucracy, the highway stretched across the nation and served the most pressing social, economic, and military needs. Thomas MacDonald regularly justified the growth of the BPR’s influence to Congress, and when he explained the balance of power to Congress, MacDonald confirmed that

⁴ Correspondence from Thomas MacDonald to Miss Alice L. Morris, “FAS – Dec. 1921 to Dec. 1925” Folder, 530/22/23/6/Box 1955, BPR Series, RG 30, NARA-II.

the department primarily served the national good. The engineers built support by employing rhetoric that their centralized and trained decisions served the greatest number and that the standardization program created a national system of quality that helped connect the entire nation while promoting highway safety and efficient construction.

The Respected 'Apolitical' Expert

As debate concerning the growing power of the federal government persisted, the Bureau of Public Roads claimed an apolitical stance. This apolitical nature provided moral and rhetorical justification to continue accruing influence. The BPR's experts knew the power of citing scientific expertise, for the Progressive Era elevated the general prominence of an educated professional managerial elite.⁵ In the context of the Progressive Era and the formalization of a collegiate engineering curriculum, the BPR continued to promote the importance of engineering expertise and education. This movement catalyzed a shift in the American zeitgeist in which the public increasingly respected the importance of the public servant.

Samuel P. Hays' *Conservation and the Gospel of Efficiency* offers a view of the rise of the utilitarian conservationists who guided America's early environmental policy. Studying forest policy, water use, and the conservation movement in the context of the Progressive Era, Hays argues that "Conservation, above all, was a scientific

⁵ For a discussion of the importance of experts in the Progressive era and the respect the public accorded them, see: Robert H. Wiebe, *The Search For Order, 1877-1920* (New York: Hill and Wang, 1967); Martin J. Schiesl, *The Politics of Efficiency: Municipal Administration and Reform in America: 1880-1920* (Berkeley: University of California Press, 1977).

movement.”⁶ From that perspective, Hays demonstrates how the lasting contributions of conservation was the dominance of the scientific elites. Though Hays offers a political history of the loyalty to professionals and their scientific ideas, his argument has been contested. Donald Worster, for instance, has shown the pitfalls of engineering the environment to privilege economic gain over long-term sustainable subsistence.⁷ Mark Fiege, though, has built on these earlier histories of scientific dominance to show the active role of nature in asserting its path, rather than bending to the will and ideal of the engineer.⁸ The history of the highway engineers builds on this conversation by blending models of technocratic vision and success; the engineers ultimately found a mediated material dominance over nature while retaining, as representatives of both the state and the expert elite, the faith of the public. The trained professional public servant returned the favor of this faith by instituting a technocratic movement in which efficiency and results were privileged, to varying degrees of success over their tenure.

Historian Bruce Seely contends that Thomas MacDonald wielded essentially-unquestioned power because he adopted the character of an apolitical professional. MacDonald, according to Seely, structured the BPR as an technocratic organization of engineers, and “the foundation of [the BPR’s] influence was expertise.”⁹ Indeed, the Secretary of Agriculture and Thomas MacDonald wielded inordinate power, which they

⁶ Samuel Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Pittsburgh: University of Pittsburgh Press, 1959), 2.

⁷ Similarly, in Richard White’s material and social history of the Columbia River, White shows how scientific ideals with specific aims came to alter competing dynamics, thus highlighting a specific type of knowledge/expertise in a specific context. Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1992); Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1995).

⁸ Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* (Seattle: University of Washington Press, 2000).

⁹ Bruce E. Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987), 99.

justified based on their apolitical expertise, and politicians deferred to them. Justifying such power, advocates of the highway bureaucracy argued: “We are going to have the best engineers in the country working on that problem” of specifications, plans, safety, and materials.¹⁰ When writing the federal aid acts, Congress ensured that the BPR employed the premiere engineers. Indeed, the federal aid acts allowed the Secretary of Agriculture to “retain ... a sum sufficient to provide the necessary expert assistants.”¹¹ While the crafters of these highway acts carefully defined nearly all financial components of the bill, they opted for giving the Secretary of Agriculture liberal power to hire engineers. Congress recognized that the public would defer to the BPR if the bureau had a body of experts to justify the organization’s decisions. In addition to politicians reinforcing the role and importance of engineers, private organizations sought assurance that experts led the highway program. Advocating for a more powerful government highway bureaucracy, the Federal Highway Council declared: “The only way to get results is to put some one or body in charge and give them authority and power to proceed.”¹² The Federal Highway Council desired a powerful group of experts in charge of all components of American highway development, who they could trust, and the FHC found that powerful group in the highway bureaucracy’s body of expert engineers.

Public opinion, and thus public support, the BPR determined, rested on their results in road construction. To gain such support that allowed the BPR to operate

¹⁰ Representative Browne speaking on HR 7617 on January 19, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1274.

¹¹ Representative Saunders speaking on HR 7617 on January 19, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1282.

¹² Petition from Federal Highway Council to House Committee on Roads, February 5, 1920, “HR66A-D29: S.1309, 3982, 2572” Folder, Box 400, “Records of the U.S. House of Representatives, 66th Congress, Papers Accompanying Specific Bills and Resolutions” Series, RG 233, NARA.

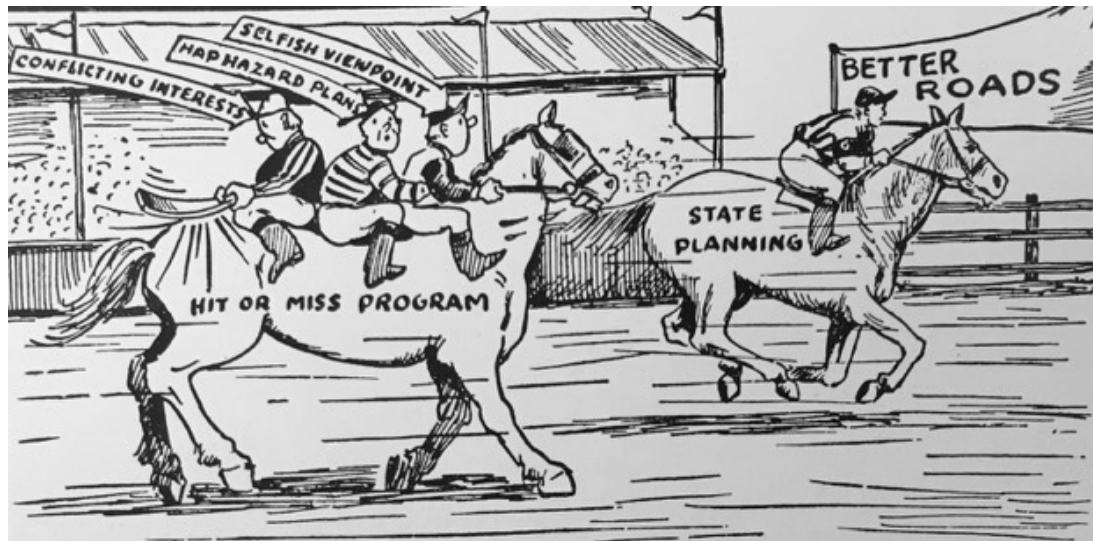


Figure 2.1: The BPR centralized authority, asserting that the state (meaning the federal government) could best direct road efforts. A singular planner, the argument went, circumvented the weight of conflicting interests, haphazard plans, and selfish viewpoints. Source: Folder 11, Box 9, Carl Albert Center.

without significant oversight, they highlighted their technical skills. In a speech on the importance of technical programs and the need to respect the highway engineer as a civil servant, MacDonald noted, “We are progressing rapidly from a highly decentralized control of highways to definitely organized systems of engineering control of all the highways from the most important to those serving only communities.”¹³ The educated engineer could enact social programs with the tacit consent of the public. In the *Breeders’ Gazette*, MacDonald argued: “Many selfish opinions lead to delays and very often poor selection of the roads for which the public expends its money.”¹⁴ He further posited that the unselfish nature of the technical expert sought the best roads for the greatest number. Advocates of the highway program accorded the BPR respect because of the “scientific practices developed by experience

¹³ Speech at Conference on Highway Engineering Education entitled “The Widening Field for Engineers in Highway Improvement and Their Training for This Field,” May 14, 1920, Box 6, Folder 5, Series 1: Personal, Thomas H. MacDonald Collection, Cushing Memorial Library & Archives, Texas A&M University Libraries (hereafter: THM Collection, Cushing Library, TAM).

¹⁴ Article prepared for *Breeders Gazette*, Dec. 1920, Box 6, Folder 13, Series 1: Personal, THM Collection, Cushing Library, TAM.

and research” that the engineers demonstrated.¹⁵ While the BPR articulated the importance of engineers, politicians across the country echoed the message. When, for example, Representative Harry B. Hawes laid out the history and future trajectory of Missouri’s highway program to his constituents, he enumerated “the essentials of a good road.” He began his list of essentials by touting the engineer: “1. A good highway engineer. This is the best investment which the State or the county can make, as everything depends upon his skill and ingenuity.”¹⁶

Through this scientific apolitical stance, the BPR elevated the status of public servants. When the public called for good roads and the BPR built good roads, highway engineers gained cachet throughout society. Politicians, educators, and highway developers began to present the expert engineer as “a leader in public service,” who, in the Progressive mold, worked to do the greatest good for the greatest number.¹⁷ Due to their extensive work in investigation and research, construction and finance, and publicity and education, the highway bureaucracy occupied the role of a “fourth branch of government,” as MacDonald often referred to his BPR.¹⁸ This managerial elite used its newfound prominence to bring order, insight, and uniformity into all spaces of American life. Politicians and taxpayers alike lauded the expertise for how effective the highway engineers were—both in economic saving and improved highway building.

¹⁵ “Why The People Built Our Highways” informational packet written by Joseph B. Eastman, 1933, “Condition and % of State Highway Completion” Folder, 530/24/22/1/Box 2, BPR Series, RG 30, NARA-II.

¹⁶ Reprinted statement of Harry B. Hawes in *Roads: Hearing before the Committee on Roads, House of Representatives, Sixty-Seventh Congress, First Session, May 28 and 31, 1921* (Washington: Government Printing Office, 1921), 23-24.

¹⁷ Address Before the Society for the Promotion of Engineering Education entitled “The Engineer as a Leader in Public Service,” Jun. 21, 1923, Box 6, Folder 41, Series 1: Personal, THM Collection, Cushing Library, TAM.

¹⁸ *Ibid.*

Success bred good publicity, and good publicity bred further influence. Iowa's Highway Department, for example, quantified their "estimated savings in these two years due to the practical utilization of this one research project" as \$155,638.¹⁹ The highway bureaucracy touted financial savings, like Iowa's, as another reason to support the highway program. Explaining the goal of the 1921 highway act, one politician explained: "the present Federal aid act is designed, primarily, to hasten the adoption of scientific methods of highway administration and construction ... and to raise the level and standardize methods of construction by subjecting the State's methods to the critical approval of the Federal Secretary of Agriculture."²⁰ Taxpayers supported the highway bureaucracy because they trusted the expert professionals who guided the program. Those experts, it is clear, came to dominate the direction of the highway development program in construction, education, and safety standards. "Without the power placed in the hands of the federal authorities," MacDonald declared in 1932, "acceptance and adherence to [a nation-wide highway plan] could not have been brought about."²¹

Federal Engineers and State Standards

As highway engineers received more power and respect from the public, they used the road plan approval process to exert their vision on the nation. In addition to their public endorsement, the highway bureaucracy employed the tools and mechanisms Congress gave them in the federal aid model. Beyond directing the engineering

¹⁹ Textual report entitled "Financial Value of Research," Nov. 29, 1924, Box 11, Folder 4, Series 2: Inter Agency, THM Collection, Cushing Library, TAM.

²⁰ *Roads: Hearing before the Committee on Roads, House of Representatives, Sixty-Seventh Congress, First Session, May 28 and 31, 1921* (Washington: Government Printing Office, 1921), 27-28.

²¹ Report on What Federal Aid Has Done For America's Highways, Sep. 10, 1932, Box 11, Folder 14, Series 2: Inter Agency, THM Collection, Cushing Library, TAM.

education and steering the federal aid state maps, BPR engineers ensured states built roads to national standards. First and foremost, the BPR needed engineers operating at all levels who were responsive to the BPR's guidance. To accomplish this goal, the BPR trained engineers, which, as seen in Chapter One, was done through partnership with colleges. MacDonald viewed the lack of engineers trained in the BPR's standards as "one of the most important problems with which the Bureau is confronted," and he took on the task of "develop[ing] and train[ing] young men."²² By then ensuring states and localities hired these men, MacDonald's vision organically trickled down. MacDonald's definition of a professional expert ensured the perpetuity of his vision for road construction. The BPR lobbied Congress to enshrine in the federal aid legislation the principle that states needed to hire trained experts. "Adequate provision," MacDonald argued before Congress, "should be made for securing and retaining the services of the men best qualified in highway engineering and administration" for state highway commissions.²³ Indeed, the legislation and process of USDA approval mandated that states privileged engineers.

While trained professionals at all levels ensured a degree of conformity, BPR engineers sought national standards for bridge construction, material composition, road grade and curve maximums, among other engineering methods and processes. To accomplish national technical standardization, the BPR helped states develop standard engineering specifications. Although these standards varied by state, they all held a

²² Memorandum from Chief of Bureau to Division Chiefs and District Engineers, April 20, 1927, "Letters & Memo. to Dist. Engrs. & Div. Chiefs, 1924-1927" Folder, 530/24/21/5/Box 2, BPR Series, RG 30, NARA-II.

²³ "U.S.—Congress. (67th congress.) Federal aid in the construction of roads.," Item, 530/24/22/1/Box 6, "Bureau of Public Roads Classified Central File 1912-1950" Series, RG 30, NARA-II.

common quality baseline that BPR engineers included. After President Wilson signed the 1916 federal aid act and the Secretary of Agriculture approved the reorganization of state highway departments, states began submitting incredibly detailed engineering specifications for each project. The BPR, in turn, scrutinized the engineering work laid out in each case. With the power to approve, reject, or suggest modifications on every federal aid project, the BPR ensured that states built America's highway system to the national standard. These federal standards ensured that highways through the states would be safe for motorists and pedestrians and would be constructed with materials and processes that would ensure the durability and longevity of the roads.

During the first few years of the modification and approval process, MacDonald recognized the inefficiencies. States and localities, for example, invoked "local climatic patterns" as reason to deviate from the BPR's standard expectations. To expedite the approval process, MacDonald worked with his district engineers to help states create standard specifications that they could apply to all subsequent projects within the respective state. With approved standard specifications, state highway commissions could achieve more progress and the federal engineers could more easily approve projects. MacDonald's reasoning for state standards rested in an ideology of efficiency: if states prepared standards for all their projects and the BPR scrutinized and helped states modify the standards upfront, individual contracts could proceed more efficiently because BPR officials need only reference the approved standards, as opposed to looking into the specifics of every project.²⁴

²⁴ For example letters to states on their state standard approvals and the process by which MacDonald asserted a national baseline standard, see the correspondences, standards, and responses under the states' file for P.S. & E. at NARA-II, including Boxes 3170 and 1738, BPR Series, RG 30, NARA-II.

MacDonald also used the standardization process as a means to further ensure national uniformity and federal control. Explaining the work, the BPR noted: “we would like to say that the Bureau is making a particular effort to emphasize that phase of simplified practice involving standardization of arrangement, form and phraseology of specifications.”²⁵ National standardization, then, guided the feedback and approval process. Although each individual state standards review process accounted for some discrepancies in local climates and conditions, the BPR ensured that every state shared a baseline standard for construction—in engineering standards, training manuals and courses, and the highway vernacular terminology. As MacDonald explained, “Each State has its standard set of specifications suited to the conditions in those States, but complying with the minimum standards set forth by the Secretary of Agriculture.”²⁶ In 1917, the Secretary of Agriculture first issued a complete set of minimum standards for states to follow on their federal aid projects. As time passed and engineering practices improved, the highway engineers updated these “Standards Governing the Form and Arrangement of Plans, Specifications, and Estimates for Federal Aid Projects.” And the BPR ensured that states updated their standards so as to always conform to the latest minimum federal standards.

In addition to mandating that states had a set of minimum standards, BPR engineers scrutinized proposed state standards; the BPR did not merely rubber stamp the standards that states proposed. These standards, such as the maximum grade of the

²⁵ Letter from Chief of Bureau to Walter R. Rowe, Dean of School of Engineering of University of Southern Carolina, July 9, 1925, “P.S.&E., July 1, 1925-Dec. 31, 1925” Folder, 530/22/17/7/Box 1734, BPR Series, RG 30, NARA-II.

²⁶ Testimony of Thomas Macdonald in *Roads: Hearing before the Committee on Roads, House of Representatives, Sixty-Seventh Congress, First Session, Part II: June 1-4, 1921* (Washington: Government Printing Office, 1921), 131.

road per 100 feet or the proper coloring of the signage for night visibility, were intended to ensure safety for motorists across state borders, ease of business for road-construction machine manufacturers, and national standards for engineers and their capabilities. Responding, for example, to Michigan's first draft of proposed standards, the BPR Chief Engineer prefaced his letter: "We ... find that [the Standard Specifications] are satisfactory for approval provided the following criticisms are met."²⁷ The Chief Engineer followed that preface with a 24-page critique of Michigan's proposal. Like Michigan, other states, such as Wyoming, Oregon, Colorado, and Arizona, received dozens of pages of comments on their respective drafts.²⁸ The BPR critiques ensured that every state complied with the minimum federal standards. For example, in the conversation concerning Colorado submitting "a thoroughly revised and complete standard specification," MacDonald instructed his district engineer and Colorado's state engineer: "In the interest of uniformity and standardization all specifications should, of course, conform with the Standard Outline of Specifications issued by the Secretary." Moreover, he added, "Such conformity, it is believed, will result in more effective cooperation in matters of design and in the advancement of standard highway practice."²⁹ MacDonald supplied Colorado with copies of standards the BPR had accepted from other states, as well as a BPR-issued standard outline. Ultimately, Colorado—like every other state—did as the BPR asked because of the reward of federal aid money and the fact that the BPR-promulgated standards ensured sound

²⁷ Chief Engineers Recommendations to Proposed Michigan Standard Specifications, January 4, 1918, "Michigan – P.S.&E, 1919-1918" Folder, 530/22/37/1/Box 2463, BPR Series, RG 30, NARA-II.

²⁸ For the letters to such states, see the correspondences under the states' file for P.S. & E. at NARA-II, including Boxes 3170 and 1738, BPR Series, RG 30, NARA-II.

²⁹ Correspondence from Thomas MacDonald, February 15, 1925, "Colorado PS&E – 1925-1928" Folder, 530/22/28/2/Box 2101, "Bureau of Public Roads Classified Central File 1912-1950" Series, RG 30, NARA-II.

quality for safety and durability. Colorado modified their standards “as rapidly as expedient ... in accordance with the [Bureau’s] Standard Outline.”³⁰ The process in Colorado reveals just one instance of the standards-approval process that every state underwent in their desire for federal money. By 1923, the BPR had approved standards for 43 states, and the BPR regularly had states revise their standards to conform to new engineering practices.³¹

The state standard approval process augmented the BPR engineers’ already considerable power over state programs. The back-and-forth over approval ensured that states complied with the latest data and tests from the federal government. Indeed, MacDonald tied the reward of federal aid to these standards: “The Federal Government helps to bear part of the cost and requires certain standards, certain rules, and certain regulations to be lived up to before the money is paid out from the Federal Treasury.”³² Although this represents a broadening of federal bureaucratic authority and oversight, the process was logical, responsible, and desired by citizens and their elected representatives. As the federal government put its stamp of approval on all federal aid roads and would ultimately be held responsible for the construction process and roads’ durability, it helped oversee the ideal road building process. While the highway bureaucracy sought a completely modern and uniform highway system throughout all local, state, and federal roads, they only had the funds and mandate to oversee federal

³⁰ Correspondence from Colorado State Highway Engineer L.D. Blauveet to District Engineer J.W. Johnson, July 8, 1925, “Colorado PS&E – 1925-1928” Folder, 530/22/28/2/Box 2101, BPR Series, RG 30, NARA-II.

³¹ Table of Approved State Standard Specifications, Nov. 1923, “July 1923 to June 1924” Folder, 30/530/22/17/7/Box 1736, BPR Series, RG 30, NARA-II.

³² Testimony of Thomas Macdonald in *Roads: Hearing before the Committee on Roads, House of Representatives, Sixty-Seventh Congress, First Session, Part II: June 1-4, 1921* (Washington: Government Printing Office, 1921), 98.

aid projects. States, though, used these approved standards on non-federal aid projects, streamlining local projects and construction. This standards program emphasized conformity to uniform federal engineering practices, and it was carried out by expert engineers. Engineers and contractors followed federal standards on federal aid roads, and they carried this knowledge and experience to their work on roads not governed by federal standards, thereby organically carrying out the BPR's mission. "The benefits [of high standards] have been felt not only on federal aid roads," one report declared, "but on all work under the jurisdiction of the highway departments." This trickle-down standardization came because of the "sound administration and high standards" implemented at the direction of the experts at the BPR.³³

Expanding Scientific Authority

Because the public supported the road building program due to the effective management and construction by experts, America's highway bureaucracy amassed more responsibility. The BPR eventually consolidated power by taking control of the research and testing process, as well as working directly with the public on informational campaigns. This consolidated research power allowed the federal government to ensure that goods roads were, in fact, good everywhere. The investment in resources and personnel for these duties represents a formal manifestation of the informational authority on which the BPR was founded. At first, the BPR oversaw state highway laboratories. Although the federal aid acts did not codify this responsibility, the BPR took control of oversight and regulation of all testing facilities with the

³³ Report on What Federal Aid Has Done For America's Highways, Sep. 10, 1932, Box 11, Folder 14, Series 2: Inter Agency, THM Collection, Cushing Library, TAM.



Figure 2.2: The BPR released images of the testing process to assert its position as a leader and the final authority. Source: NARA-II, 119_M-1A_28.

justification that it needed to ensure the standards of all reports and data, should state officials argue that local climatic conditions dictated a deviation from national standards.³⁴ Additionally, the BPR influenced testing and standards in states by recommending equipment and procedures, sending out information to laboratory technicians like the American Society for Testing Material’s “Manual of Cement Testing.”³⁵ Indeed, states conformed to these national guidelines.

Eventually, the BPR saw its opportunity to further consolidate its oversight and technical power, for it declared in 1932: “For next year’s program, we desire to eliminate the use of all commercial laboratories and confine the work, as much as

³⁴ Correspondence from Chief of Division of Tests to Wyoming State Testing Engineer, March 6, 1923, “Wyoming Tests 1936-1919” Folder, 530/22/54/1/Box 3171, BPR Series, RG 30, NARA-II.

³⁵ Memorandum from District Three Test Engineer, January 12, 1927, “Wyoming Tests 1936-1919” Folder, 530/22/54/1/Box 3171, BPR Series, RG 30, NARA-II.

possible, to the Bureau of Standards and our own laboratory in Washington.”³⁶ Although commercial and university laboratories remained important sources of knowledge and testing contributing to the engineer’s repertoire and library, the BPR did significantly expand its own scientific capability through significant investment in facilities and personnel. In 1937, the BPR opened a new massive “Campus-Like Road Laboratory” testing facility, as the *Washington Post* headline asked and answered: “College Campus? No, New United States Road Testing Plant.”³⁷ With the BPR’s oversight and standardization, its role as an informational clearinghouse and technocratic adviser expanded.

The BPR shared the knowledge it accrued through its testing facilities to both engineers and the general public. Moreover, the BPR expanded the scope of its research beyond the purely technical components of the highway program. The BPR launched campaigns for highway safety, for instance, establishing and leveraging partnerships with schools, private organizations, newspapers, and film studios. In 1938, the BPR published the pamphlet “Guides to Traffic Safety” to provide help “to municipal or town safety commissions or councils, to grammar and high school teachers and to parent-teacher associations, to librarians, to clubs and chambers of commerce, and to the individual citizens eager to understand the safety situation and to do his duty in working the interests of safety.”³⁸ By the late 1930s, many schools across the nation taught the BPR’s traffic safety program.

³⁶ Memorandum from Palen, January 4, 1932, “Wyoming Tests 1936-1919” Folder, 530/22/54/1/Box 3171, BPR Series, RG 30, NARA-II.

³⁷ “College Campus? No, New United States Road Testing Plant,” *Washington Post*, May 2, 1936.

³⁸ Press Release of United States Department of Agriculture: “SCHOOLS TEACH CHILDREN TO AVOID TRAFFIC PERILS,” March 15, 1938, “1938—File Copies” Folder, 530/24/22/1/Box 8BPR Series, RG 30, NARA-II.

In addition to reaching the public through schools, the BPR reached out directly to the public through the medium of film. Beginning in 1935, *Time* produced “March of Time,” a hugely popular monthly film show.³⁹ In 1938, *Time* released the episode entitled “MAN AT THE WHEEL,” a presentation of highway safety practices and road improvement programs, produced in coordination with BPR and state highway officials.⁴⁰ The automobile at this point in time, the narrator (“Voice of Time”) declares, was “a family necessity,” but on the road the driver still encounters the police. “Behind today’s highway officer and his new enforcement attitude,” the viewer is informed, “is a system of traffic police education, which in the past few years has been accepted by every forward-looking state.” The video shows rows of uniform policemen in classes, along with officers spending time in libraries and studying accidents. This portrayal, done in conjunction with professionals of the BPR, was meant to emphasize the uniformity of safety standards and the advanced scientific knowledge behind the standards’ enforcement.

In “MAN AT THE WHEEL,” Lieutenant Franklin M. Fremel, the head of the Safety Division of the International Association of Police Chiefs remarks: “Our present police departments, engineering divisions, and schools ... can develop ... a program of Engineering, Education, and Enforcement that would reduce [the accident] rate in cities everywhere from 25-50 percent.” The video goes on to detail this program of “Three E’s,” taught at traffic schools across the country. The public is informed that they should follow advice from the expert studies conducted, which had been taught to the 24 states

³⁹ Raymond Fielding, who analyses the series, refuses to define it as a documentary, newsreel, or film; he argues that the episodes contained elements of each. For a full introduction and analysis to this series, see: Raymond Fielding, *The March of Time 1935-1951* (Oxford: Oxford University Press, 1978).

⁴⁰ *The March of Time: Man at the Wheel* 4, ep. 13. (New York City, New York: Time, Inc., 1938).

who had sent representatives to Lieutenant Fremel's course at Northwestern University Traffic Institute. "A thoroughgoing analysis" leads to a "plan of attack" to solve traffic problems. This video, shown to millions across the country and internationally, reinforced a belief in the highway safety program developed by experts. National highway experts taught local highway departments, who taught the general public. This hierarchy exemplifies the power vested in highway engineers, the professionals who were called upon by local politicians and public citizens to ensure the highest standards for safety. Indeed, by 1938 when Mildred Wilson compiled a bibliography for the BPR of all titles relating to highway safety published throughout the nation, she recorded nearly 1,400 titles.⁴¹ Safety became a key component of the BPR's program, and the BPR's influential reach touched citizens—drivers and children, alike. The establishment and prominence of the BPR's education and research arm further expanded the bureaucracy and allowed the BPR to influence more individuals directly. This expansion, though, was premised on useful information for both engineers and the public, expected to be used to ensure proper construction with adequate materials and effective use and safety of roads by the motoring public. Not only was safety under the purview of the BPR, but the program to educate the nation on how to conduct oneself safely as a driver or pedestrian also became the task of the bureau.

Standardized Highway Materials and Products

This growing dependence on, and belief in, engineers manifested in myriad programs aimed at implementing national uniformity. In addition to the aforementioned

⁴¹ Mildred A. Wilson, *Bibliography on Highway Safety—Miscellaneous Publication No. 296* (Washington: Government Printing Office, 1938).

state standards and information, the BPR promoted uniformity in construction materials. Just as the federal highway bureaucracy exerted influence over states' standards and technical specifications, the BPR used a similar method of control and influence to ensure manufacturers produced uniform goods and materials.⁴² The government worked with business to manage highway supplies. This reciprocal relationship between companies and the BPR helped solidify the federal engineers' control. Just as highway engineers endorsed certain companies and products, the businesses supported the BPR's centralized control. This organic reciprocal relationship helped ensure that states across the nation employed BPR oversight and adequate national materials.⁴³

The BPR's close relationship with businesses throughout the period challenges some scholarly interpretations, showing a continuity in a public-private mutually beneficial relationship.⁴⁴ For example, the highway bureaucracy approved of the cement produced by the American Concrete Institute. The Institute, then, publicly promoted the need for authority centralized in the highway bureaucracy. Henry B. Alvord, the Secretary of the American Concrete Institute, declared: "if any road work whatever is

⁴² Bruce E. Seely finds that a new pattern emerged with the government holding a leading role in instituting uniformity in: "Engineers and Government-Business Cooperation: Highway Standards and the Bureau of Public Roads, 1900-1940," *The Business History Review* 58, no. 1 (1984): 51-77.

⁴³ I have found no evidence of an explicit quid-pro-quo between the government and any business; however, the BPR's publicity certainly helped businesses profit, while businesses' responsiveness to the BPR's standards ensured they would continue to receive free BPR promotion.

⁴⁴ Scholars often see the 1910s as one in which business and government were often disparate: the most powerful reform lobbyists often functioned as individuals or as members of private civic organizations, not producing companies. Through the 1920s, the Harding, Coolidge, and Hoover administrations all favored a laissez-faire economic doctrine; they tried to separate government activism from pro-business policies. However, the 1920s also saw the realization of Hooverian associationalism which was a turn from the 1910s: in this new policy, the government reacted to problematic industries, often at the behest and on the advice of other businessmen, unlike the prior discussion with interested civic and labor stakeholders. For a discussion of the presidential politics of the 1920s and the administrations' reactions to uncertain economic and social times, see: Niall Palmer, *The Twenties in America: Politics and History* (Edinburgh: Edinburgh University Press, 2006). For a discussion of the associationalist state, see: Ellis W. Hawley, *The Great War and the Search for a Modern Order: A History of the American People and Their Institutions, 1917-1933*, 2nd ed. (Prospect Heights, IL: Waveland Press, Inc., 1997).

to be done in the coming season equitable selection of the work to be done must be determined by competent authority.”⁴⁵ According to Alvord, that competent authority rested in the expert engineers employed by the highway bureaucracy who had matriculated through a training curriculum guided by the BPR. The BPR, then, supported businesses which had standardized and approved materials, and these businesses, in turn, promoted the BPR’s authority. Favored companies helped promote the benefits of government-mandated standardization. The president of the O.K. Harry Steel Company declared: “I would consider it advisable and to the point if the United States Government would endeavor to standardize materials and construction for roads, then I believe we would have better roads; more permanent roads as a result of such action.”⁴⁶ This relationship allowed the BPR to favor certain materials and production methods, thereby establishing uniformity without consulting or negotiating with the states.

In addition to government-business cooperative efforts, the BPR ensured material met standard specifications with the help of the American Society for Testing Materials (ASTM). BPR engineers dictated standards, companies produced materials to said standards, and ASTM and BPR labs ensured that companies complied, pushing state and federal business to approved manufacturers. The ASTM acted as an intermediary for government and industry after it was established in 1898, and especially in the 1910s and 1920s when the BPR promulgated uniform specifications. On one side, the ASTM coordinated with the BPR to help determine standards for

⁴⁵ Correspondence from Henry B. Alvord to U.S. Department of Agriculture, Dec. 6, 1917, “Federal Aid System—1918-17” Item, 530/22/23/6/Box 1956, BPR Series, RG 30, NARA-II.

⁴⁶ Correspondence from O.K. Harry Steel Co. to L.W. Page, Dec. 29, 1917, “Federal Aid System—1918-17” Item, 530/22/23/6/Box 1956, BPR Series, RG 30, NARA-II.

materials in road construction. On the other side, the ASTM represented the interests of trade groups and manufacturers, which solidified buy-in from such groups.

In 1927, the BPR released, for example, its “Manual and Specifications for the Manufacture, Display and Erection of the U.S. Standard Road Markers and Signs,” and the ASTM helped companies follow the standards. This manual defines the paints that should be used on highway signs to achieve optimal light reflection, and the ASTM tested and approved (or rejected) the paints of different companies. For example, the ASTM determined that No. 5 Highway Yellow made by The Detroit Graphite Company met the specifications of having a dominant wave length between 580 and 586 millimicrons (581.5 millimicrons), a purity above 80 percent (83 percent), and an integral reflection of pigment level above 35 percent (59 percent).⁴⁷ Passing these three tests by meeting the ASTM’s and BPR’s benchmarks, The Detroit Graphite Company received the ASTM’s endorsement. With the ASTM’s mark of approval, this yellow paint was marketed to states, and states could more easily follow the specified uniform guidelines. By releasing standard materials and monitoring companies’ adherence to such standards, the BPR engineers facilitated the implementation of national safety and material standards in the public interest.

In addition to overseeing the compliance of businesses, the federal government required states to test materials and submit the results. These tests instilled in state highway departments a culture of oversight of business and compliance with federal expectations. Like with technical questions, the BPR’s expertise reigned supreme with testing compliance; both states and companies looked to the BPR in times of question

⁴⁷ Department of Commerce Bureau of Standards Report on Feb. 9, 1926, “Jan. 1926-Jul. 1926” Folder, 30/530/22/17/7/Box 1734, BPR Series, RG 30, NARA-II.

or conflict, thereby augmenting the bureau's power to standardize. Michigan, for example, experienced "quite a little trouble with cement" from Newaygo, a local cement supplier. After the Newaygo brand cement failed in the Michigan State Highway Laboratory at the University of Michigan, the Newaygo chemists criticized the state's laboratory and procedure. The Director of the Michigan laboratory complained to the BPR's Chief of the Division of Tests: "the charges of [Newaygo's] representatives that our laboratory is not operating in accordance with the specifications, or with generally recognized food practice, is quite disturbing to the department."⁴⁸ Michigan asked for the BPR to assure quality in the lab and issue a statement of public support, if of course the BPR certified that Michigan's laboratory deserved such an endorsement. In addition to referring to a previous report the BPR issued on the quality of Michigan's facilities, the Chief of the Division of Tests W. J. Kelley wrote to the Michigan laboratory director: "I do not believe that either of the adverse criticisms made by the representative of the Newaygo Cement Company is valid."⁴⁹ The BPR's opinions on proper practice held great weight, and states and companies both deferred to the BPR as the final arbiter on quality assurance.

As the power of the BPR grew, America's contractors, manufacturers, and highway inspectors came to expect uniform standards they could find easily and adhere to throughout the construction process. The BPR issued specifications on standards for materials, just as they issued and reviewed technical standards. In 1923, for instance,

⁴⁸ Correspondence from Director of Michigan State Highway Laboratory to E.F. Kelley, August 8, 1931, "Monthly Test Reports – Michigan" Folder, 530/22/37/1/Box 2465, BPR Series, RG 30, NARA-II.

⁴⁸ Department of Commerce Bureau of Standards Report on Feb. 9, 1926, "Jan. 1926-Jul. 1926" Folder, 30/530/22/17/7/Box 1734, BPR Series, RG 30, NARA-II.

⁴⁹ Correspondence from E.F. Kelley to W.J. Emmons, August 13, 1931, "Monthly Test Reports – Michigan" Folder, 530/22/37/1/Box 2465, BPR Series, RG 30, NARA-II.

the Superintendent of New York Department of Public Works complained to MacDonald about the last unstandardized component of cement, water; he noted that every other ingredient was prescribed, yet the lack of a standard in water impeded uniform construction.⁵⁰ After standardizing the rest of the process, officials expected guidelines on all materials. Working with engineers and manufacturers, the BPR experts established criteria for nearly all materials used in highway building—including, eventually, the amount of water in cement.

BPR experts displayed their power by releasing standards and acting as arbitrators between the states and contractors. After confusion about materials between Nevada and local contractors, for instance, both sides reached out to BPR engineers to settle the dispute. Following the successful arbitration in this scenario, the BPR released a policy statement enshrining their newfound position in guiding both sides to a satisfactory resolution: “our engineers have, on occasions, been asked to act as arbitrators between the state and construction contractors on work in which Federal Aid is not involved. In all such cases, we are glad to have our men so act because we believe they are in a position and generally have an attitude of mind which should make them fair and disinterested arbitrators in every respect.”⁵¹ The BPR positioned their men as disinterested parties, but the BPR engineers maintained the national standards and expectations of the federal system. Therefore, the arbitration was biased, but it resulted in a resolution successful in the eyes of the federal government and the public that

⁵⁰ Letter from Superintendent of NY Department of Public Works to Chief of Bureau of Public Roads, October 9, 1923, “P.S.&E. July, 1923 to June, 1924” Folder, 530/22/17/7/Box 1736, BPR Series, RG 30, NARA-II.

⁵¹ Bureau Engineers Acting as Arbitrators Between State & Contractors, August 8, 1920, “Policy Extracts Mch. 4 to July 30 1920” Item, 530/24/21/5/Box 5, BPR Series, RG 30, NARA-II.

expected safe and durable roads. In their apolitical advisory role, the BPR engineers engaged with non-federal aid projects to enact uniform standards, thereby providing drivers, passengers, and pedestrians across the nation with a safer experience.

Uniform Traffic Safety Codes

In addition to the state standards and business-government cooperation, BPR officials attempted to work through state officials to enact a uniform vehicle codes and legislation. To achieve legislative uniformity in states across the country, the BPR worked closely with an influential quasi-private organization, the American Association of State Highway Officials (AASHO). AASHO membership included BPR officials and the top officer from each state highway department. Beginning with its founding in 1914, the AASHO brought together influential highway officials in America “to promote a closer relationship between State highway departments with a view of establishing uniform system of administration, construction and maintenance.” The AASHO’s charter lays out how exactly the organization functioned within the highway bureaucracy: “to cooperate in every way possible with the United States Office of Public Roads or similar Federal organization.”⁵² The BPR used this organization to allow state highway officials to voice opinions and feel a sense of ownership.

As the AASHO’s leadership included state highway officials in addition to BPR officials, the BPR held sway within the organization’s proceedings and actions, which translated to support from state and local highway influencers. As with other initiatives

⁵² The Office of Public Roads was the name of the predecessor organization to the Bureau of Public Roads. American Association of State Highway Officials Constitution, Box 15, Folder 45, Series 3: Other Federal, THM Collection, Cushing Library, TAM.

promoting national consolidated decision-making and standards, the AASHO helped promote this new balance of state-federal cooperation. The AASHO thrived because it carried the leadership of the BPR and the buy-in of state officials. During his tenure as Chief of the BPR, Thomas MacDonald always delivered the keynote address at the AASHO's annual conference. Moreover, MacDonald controlled the purse of the AASHO, which allowed him to dictate the priorities of their committees and pursuits. While BPR officials largely helmed the AASHO, they established a dialogue that included state officials, thereby fostering and buttressing local support.

The AASHO often articulated and advocated for BPR priorities; the BPR used the organization as a means to establish diverse support networks. Once BPR officials convinced state officials of the efficacy of national campaigns and priorities, the state officials could relay their support to their home states. These local officials, then, served as highway bureaucracy boosters. The AASHO and BPR teamed up on uniform administrative laws and traffic safety mechanisms for states to enact, which serves as an example of the national partner leading initiatives and soliciting state officials' support. The problem of traffic safety had been exacerbated with the proliferation of automobiles, the ever-increasing power of the automobiles, and the growing and disjointed highway system. Between 1900 and 1938, the number of highway fatalities never decreased year-over-year, reaching 37,819 fatalities in 1938, largely owing to the consistent expansion in the number of cars on the roads.⁵³ Highway experts regularly

⁵³ The trends largely bear out when looking at the fatalities per registered motor vehicles or the fatalities per miles of road; these proportionate data show a peak in fatality rate in the late 1930s before a significant reversal. "Motor Vehicle Traffic Fatalities, 1900-2007, National Summary," USDA Federal Highway Administration Office of Highway Policy Information, January 2009, <https://www.fhwa.dot.gov/policyinformation/statistics/2007/pdf/fi200.pdf>.

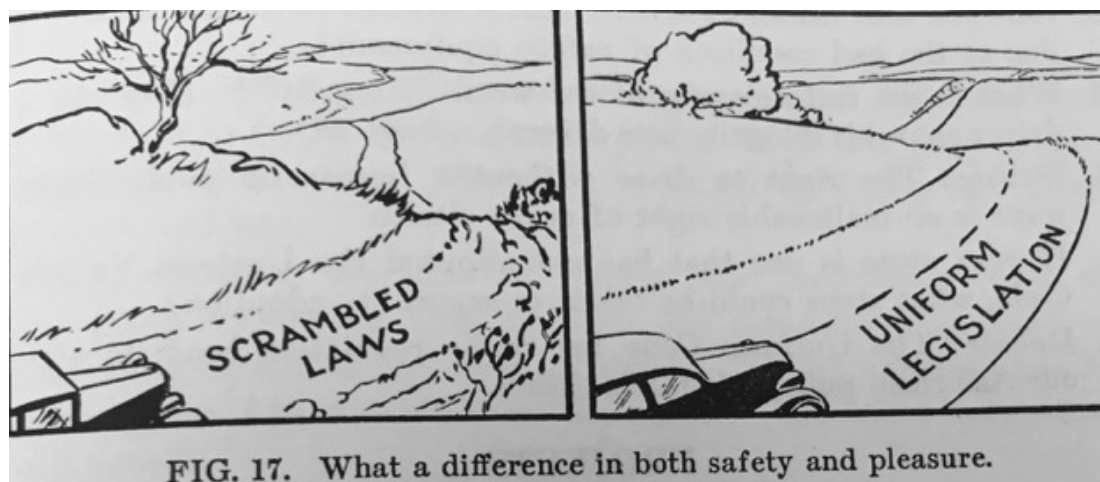


Figure 2.3: Uniform legislation, the BPR argued, would ensure safe and efficient roads. The uniform legislation they promoted, of course, came from within their own ranks. Source: Folder 11, Box 9, Carl Albert Center.

warned politicians about the perils of a disjointed system without uniform regulations and laws. In an annual report to Congress, MacDonald warned: “With the increase in motor vehicle traffic, particularly interstate traffic, the establishment of regulation uniform throughout the country is becoming of great influence. Such regulations must of course cover weight, size and speed restrictions.”⁵⁴ The BPR-AASHO partnership undertook the issue in each state, promoting uniform traffic safety regulations. Due to the AASHO’s federal-state initiatives, the trend of increasing fatalities reversed: by 1939, there were fewer than 31,000 fatalities.⁵⁵

Under the auspices of the National Conference on Street and Highway Safety (NCSHS), the AASHO and BPR led a coalition of highway-related interest groups to develop a model set of uniform highway legislation. In late 1925, the AASHO met in

⁵⁴ “Department of Agriculture Federal Aid and National Forest Highways Annual Report to Congress, Fiscal Year Ended June 30, 1924” Item, 530/B/1/3/Box 1, BPR Series, RG 30, NARA-II.

⁵⁵ “Motor Vehicle Traffic Fatalities, 1900-2007, National Summary,” USDA Federal Highway Administration Office of Highway Policy Information, January 2009, <https://www.fhwa.dot.gov/policyinformation/statistics/2007/pdf/fi200.pdf>.

Detroit and undertook the study of the high casualties related to streets and highways.⁵⁶ The organization looked at traffic control, construction and engineering, and public driver education, among other prevalent issues and appointed a committee to study this issue and devise a “Uniform Motor Vehicle Code.” In 1926, this NCSHS committee released their first iteration of the motor vehicle codes, a set of five pieces of model legislation for states to ratify. The committee on traffic safety took ownership of the laws, yet this, again, represented a BPR-led initiative: Thomas MacDonald nominated every member of the committee.⁵⁷ Secretary of Commerce Herbert Hoover led the NCSHS and chaired the 1926 conference at which the organization adopted the Uniform Vehicle Code. Although the BPR led the fight for traffic safety through the AASHO, the BPR was responding to public needs: citizens and their elected officials called for a safe motoring experience—the public refused to accept over one fatality per 100 miles of road.

At the 1926 NCSHS conference, the Uniform Vehicle Codes were adopted by a diverse coalition of delegates from 43 states. Governors of 43 states had appointed official delegates to attend the conference, and traffic and police officials from across the nation also attended the gathering. In his opening remarks, Herbert Hoover assured the audience: “It is my belief that in presenting the ... laws which make up this code to the various state legislatures throughout the United States this Conference is making a contribution to the effort to save lives and human suffering which can never be measured

⁵⁶ Herbert Hoover’s Opening Address to the National Conference on Street and Highway Safety, “National Conference on Street & Highway – 1926” Folder, 530/24/25/2/Box 3, BPR Series, RG 30, NARA-II.

⁵⁷ For example, see Correspondence from Herbert Hoover to L.E. Boykin, nd., “National Conference on Street & Highway – 1926” Folder, 530/24/25/2/Box 3, BPR Series, RG 30, NARA-II.

in dollars and cents.”⁵⁸ In addition to adopting the vehicle codes, the conference determined that public and private elementary schools, night schools, vocational schools, citizenship schools, and schools for non-English speakers should incorporate accident and safety prevention education.⁵⁹ Over the subsequent years, the American education system incorporated the ideals set forth in the acts ratified in 1926. The five acts constituted a ready-made uniform policy that experts in Washington, D.C. proposed and distributed to the states for legislative ratification. These acts, as their authors declared, were “recommended for State enactment as the foundation for uniform traffic regulation.”⁶⁰ These recommendations were comprehensive: from the proper administration of a department of motor vehicles and highway patrol to the imposition of a uniform speed limit (20 miles per hour in business districts, 25 in residential, and 45 on all other roads); from regulating the acceptable size and weights of vehicles to laying out the liabilities of the states, counties, and municipalities.⁶¹

The committee that assembled the Uniform Vehicle Code addressed the highway safety issue as a national problem. Hoover echoed the BPR’s framework of the importance of centralized decision-making with local support:

This problem is not a problem to be solved by individual cities or even individual states, without regard to the conditions existing in other cities and other states. It is, after all, intellectually an interstate problem, yet

⁵⁸ Herbert Hoover’s Opening Address to the National Conference on Street and Highway Safety, “National Conference on Street & Highway – 1926” Folder, 530/24/25/2/Box 3, BPR Series, RG 30, NARA-II.

⁵⁹ Resolutions of the NCSHS, “National Conference on Street & Highway – 1926” Folder, 530/24/25/2/Box 3, BPR Series, RG 30, NARA-II.

⁶⁰ United States Department of Agriculture, Bureau of Public Roads publication: “Act I: Uniform Motor Vehicle Administration Registration, Certificate of Title and Antitheft Act,” Box 8, Folder 45, Series 3: U.S. House of Representatives, 1926-1942, Carl Albert Congressional Research and Studies Center, the University of Oklahoma (hereafter: CAC, OU).

⁶¹ For more, see each individual act: I.—Uniform Motor Vehicle Administration, Registration, Certificate of Title and Antitheft Act; II.—Uniform Motor Vehicle Operators’ and Chauffeurs’ License Act; III.—Uniform Motor Vehicle Civil Liability Act; IV.—Uniform Motor Vehicle Safety Responsibility Act; V.—Uniform Act Regulating Traffic on Highways.

one which must be solved materially and actually by the individual states acting in concert and not by the federal government or by some establishment set up by the federal government.⁶²

In this statement, Hoover recognized the national ramifications of highway safety, yet he claimed it should be dealt with on a local level. To assuage the concerns of the growing national power, the NCSHS released their model law as a recommendation to the states, for slight modification based on local concerns. Indeed, the NCSHS, although led by agents of the federal government, asserted that its mission was to facilitate “individual states act[ing] in concert.” Hoover understood that uniformity could ameliorate traffic fatalities. While Hoover chaired the conference, the BPR and Department of Commerce played a significant role in organizing it, thereby establishing a precedent of federal organization and leadership. At the conference, Governor John G. Winant of New Hampshire even made the case that this work comprised a function of the government promised in the nation’s founding documents. “One of the fundamental guarantees of government is the right to life and happiness,” Governor Winant opined, “and therefore we are dealing, as I understand it, with a fundamental function of government.”⁶³ Indeed, the federal government had taken on, without objection, the responsibility of guiding and standardizing state safety and traffic law. States assented because the importance of this work and the way that state officials were brought into the process in the AASHO and NCSHS.

⁶² Herbert Hoover’s Opening Address to the National Conference on Street and Highway Safety, “National Conference on Street & Highway – 1926” Folder, 530/24/25/2/Box 3, BPR Series, RG 30, NARA-II.

⁶³ John G. Winant’s Address to the National Conference on Street and Highway Safety, pp. 26, “National Conference on Street & Highway – 1926” Folder, 530/24/25/2/Box 3, BPR Series, RG 30, NARA-II.

This uniform code gained traction, both garnering popular support and winning legislative authority in the states. The BPR and AASHO led campaigns to foster support for these laws at the state level. By the mid-1930s, for instance, 39 states had enacted driver's license laws that reflected parts of the proposal in the Uniform Vehicle Code. Indeed, these driver's license laws established a system of national identification mutually recognized between all states. This success, along with other legislative ratification of uniform laws, came from dedicated state lobbying. Highway officials regularly gathered to reflect on the efforts of state motor vehicle laws. In Illinois, for example, a federal representative of the Committee on Uniform Traffic Regulation met with Governor Henry Horner in November 1936 and convinced the Governor to take on the drivers' license law and uniform vehicle code. When the highway officials next convened, Illinois had not yet voted on the laws, but the committee kept up pressure on politicians and the public. These federal highway officials went to Illinois to advertise their "Keep Chicago Safe" plan, a reflection of the uniform codes. The experts, then, did not only propose uniform codes, but they actively campaigned for implementation. These campaigns worked: by 1936, 21 states had adopted the proposed "standard regulatory laws" and 16 states had adopted a modified set of laws.⁶⁴

The highway bureaucracy did not have the power to regulate individual drivers across the nation. Instead, the federal highway experts proposed model state laws, funded research of effective regulations, and lobbied for the adoption of laws at the state level. In 1936, Congressman Wilburn Cartwright, chairman of the House's Committee

⁶⁴ Report on Status of Motor Reform Legislative Campaigns Initiated By Accident Prevention Conference at the Accident Prevention Conference in Washington, D.C., Feb. 1937, Box 10, Folder 2, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

on Roads, guided the passage of H.R. 10591, mandating that \$75,000 of the BPR's budget went to "study and research of traffic conditions and measures for their improvement."⁶⁵ The BPR, again, employed experts in a coordinated, top-down effort to study the safety problem, working with the leaders of the AASHO, Highway Research Board, American Automobile Association, Society for Automotive Engineers, Harvard Bureau for Street Traffic Research, and other agencies and institutions. This study found—in agreement with the expert consensus—that many accidents resulted from "the lack of uniformity of State motor vehicle laws."⁶⁶ In the final version of the report, its authors stated: "There is an obvious and urgent need for uniformity in speed laws, boulevard-stop regulations, left-turn rules, and other phases of traffic control in which it is highly important that everyone do the correct thing."⁶⁷ In addition to funding research and crafting laws, the BPR and federal officials took their campaign and the research's findings to the public. Cartwright, for instance, published his own article: "CAN UNCLE SAM CHASE DEATH FROM THE HIGHWAYS?" In addition to using this article to advocate for funding to improve more roads to curtail the "more than 100 deaths a day for the last year" due to automobile accidents, Cartwright placed his trust in suggestions and roads in the "traffic engineers" and "highway authorities."⁶⁸ Similarly, the BPR and AASHO worked with film studios and educational institutions

⁶⁵ *An Act To authorize the Secretary of Agriculture to investigate and report on traffic conditions, with recommendations for corrective legislation*, Public Law No. 49, U.S. Statutes at Large 74-768 (1936): 1892.

⁶⁶ Preliminary Report to Congress on Study and Research of Traffic Conditions and Measures for their Improvement, March 23, 1937, Box 9, Folder 26, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

⁶⁷ United States Department of Agriculture—Bureau of Public Roads, *HIGHWAY ACCIDENTS: Their Causes and Recommendations for Their Prevention* (Washington: US Government Printing Office, 1938), 4.

⁶⁸ Wilburn Cartwright and Jack Dew, "CAN UNCLE SAM CHASE DEATH FROM THE HIGHWAYS?," *Liberty*, Mar. 27, 1937.

to craft lessons on highway safety. The government, then, grew its power, but it grew its power for a salient reason—public safety—and it did so at the behest of the public.

Where states did not cooperate or where traffic fatalities remained high, the BPR tried to reach individual motorists and pedestrians with a public traffic safety education campaign. To accomplish this, the BPR enlisted the help of outside groups and thinkers. For example, Professor W.P. Eno wrote the first tract on safety standards and traffic organization “Rules of the Road,” which was adopted as the world’s first traffic plan by New York City in 1909.⁶⁹ Starting as a private individual petitioning New York City to institute a traffic safety program, Eno eventually worked with the Highway Research Board through his privately funded research organization, the Eno Foundation for Highway Traffic Regulation (founded 1921).⁷⁰ His philosophy on traffic became the standard. Similarly, the American Automobile Association published an 80-page

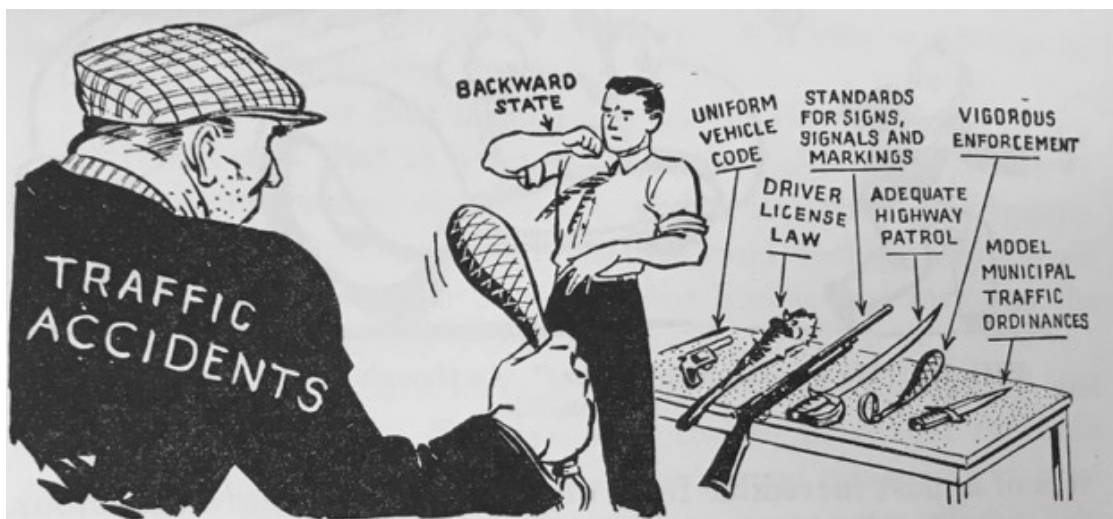


Figure 2.4: The BPR provided states with all the “weapons” necessary to protect against traffic accidents. Backward states, however, ignored these tools and used only an ineffective forearm—hope. In exchange for BPR control and oversight, states could achieve safety. Source: Folder 11, Box 9, Carl Albert Center.

⁶⁹ For an overview of Eno’s work and its implementation, see: William Phelps Eno, *The Story of Highway Traffic Control, 1899-1939* (New York: The Eno Foundation for Highway Traffic Control, Inc., 1939).

⁷⁰ The name has since changed to “Eno Center for Transportation.”

booklet, among numerous other informative pamphlets, entitled “Driver and Pedestrian Responsibilities” that detailed much of the expert advice that individuals should learn and follow.⁷¹ The experts garnered public support because they maintained an aura of expertise based on data-driven subjective knowledge, and this allowed the public to place trust in the BPR and its decisions. By 1935, the BPR informed President Roosevelt that “the federal government in cooperation with many official and unofficial agencies” formulated, advertised, and implemented many legal and educational processes. These processes maintained the goal of traffic safety, and the BPR’s professional experts informed safety programs across the nation.

For the most part, the BPR relied on publicity campaigns, their stature as experts, organizational partnerships, and scientific data to convince states to ratify legislation. When possible, however, the BPR used the power of federal aid to dictate speed limits and laws. In small towns along federal aid routes, for instance, local police and highway departments established “unreasonably low speed limits” creating “speed traps.”⁷² These speed traps, such as the 10 miles per hour limit in Santa Fe, NM, imposed on motorists traveling a federal aid highway to the chagrin of both travelers and highway engineers. Beginning in 1928, the BPR began to add a condition of local speed limits into its approval process for federal aid. “Hereafter in all cases where a federal aid project is to be routed through or near any town,” the BPR declared, “the significance of the route as a main thoroughfare should be made plain to the local authorities, and we should have assurance that they will so consider and treat the route and establish no

⁷¹ *Driver and Pedestrian Responsibilities* (Washington, D.C.: American Automobile Association, 1936).

⁷² Letter to All District Engineers from P. St. J. Wilson, October 1928, “F.A.S. January 1928 to December 1929” Folder, 530/22/23/6/Box 1954, BPR Series, RG 30, NARA-II.

ordinance and erect no semaphores or signals giving preference to other local routes.”⁷³ Through federal aid approval, then, local towns became subject to BPR guidelines on speed and traffic. In compliance with the BPR’s expectations and the District Engineer’s personal pleas, New Mexico’s State Highway Commission unanimously approved a resolution reversing the low speed limit law, requiring towns to enact speed laws at a minimum of 20 to 25 miles per hour along main thoroughfares.⁷⁴

Where the BPR could use its coercive power, it did; where it could not, the bureau relied on working with private and state organizations to implement a national uniform vehicle code. Indeed, with the growing power of the BPR, states came to rely on the bureau’s expertise and insight. The BPR regularly conducted traffic safety surveys to promote national plans. In 1937, for example, the BPR conducted “cooperative” surveys with 45 states. The cooperative, surveys, however, were conceived, developed, and analyzed by federal experts alone. The 45 states signed off onto allowing the BPR to install car-counting devices along highways and streets to measure speeds, weight, and volume of traffic. The states consented to these studies because of the belief that federal experts would help develop a policy that would serve the greatest good and the greatest number. This program allowed the BPR into state territory to collect personal data. The BPR submitted results back to states, so the state legislators could champion these policies recommendations.⁷⁵ As the statistics above demonstrate, this process worked; the federal-state partnership, led by the federal

⁷³ Letter to All District Engineers from P. St. J. Wilson, October 1928, “F.A.S. January 1928 to December 1929” Folder, 530/22/23/6/Box 1954, BPR Series, RG 30, NARA-II.

⁷⁴ New Mexico State Highway Commission Resolution approved July 12, 1928, “F.A.S. January 1928 to December 1929” Folder, 530/22/23/6/Box 1954, BPR Series, RG 30, NARA-II.

⁷⁵ “State-Wide Highway Planning Surveys—News Bulletin No. 21 For Bureau Managers” Item, 530/24/23/L/Box 2, BPR Series, RG 30, NARA-II.

experts, helped ameliorate highway danger, reversing the trend of highway fatalities by the late 1930s.

Highway Aesthetics

The BPR also affected a program of highway signage uniformity and roadside beautification. The BPR standardized signage under the auspices of promoting greater traffic safety, thereby nurturing public support for the program. In 1935, for instance, the AASHO drafted and released a new “Manual on Uniform Traffic Control Devices for Streets and Highways.” Within weeks, the Secretary of Agriculture stamped his approval on these recommended means of traffic control. This manual laid out the specifications for signage and lights along highways, and states followed these standards on both federal aid and non-federal aid roads. States sought the means to reduce highway fatalities, and this signage program offered them one such solution. Additionally, the BPR worked with road sign manufacturers to push approved highway signs and designs. In 1928, for example, the Auto Sign Display Co. of Mo. sent their brochure to the BPR. The BPR forwarded the brochure to the Colorado State Highway Engineer, giving the Missouri company the BPR’s approval.⁷⁶ Once states contracted with certain sign suppliers on federal aid highways, they often used the same companies and signs for state highways. By guiding policy on federal roads, the experts could influence the look of local roads.

⁷⁶ See the exchange between BPR, Auto Sign Co. of Mo., and Colorado’s State Highway Department in Folders: “Colorado PS&E – 1925-1928” and “481—Colo. PS&E – 1929,” 530/22/28/2/Box 2101, BPR Series, RG 30, NARA-II.

Similar to the way the BPR gave states a degree of control, albeit nominal, in their writing of standards, the BPR proceeded likewise with the signage program. For example, the BPR recommended a certain design of the federal aid markers only for the highways they could control—the federal aid system highways. While suggesting this design—and including a blueprint example of a design—the federal government reserved the right to approve and reject any marker design the states ultimately chose. In a memorandum to all district engineers, P.S.J. Wilson, the BPR's Chief Engineer, explained: "For some time it has been apparent that a marker of some kind was necessary to indicate the limits of Federal Aid Projects." In his recommendation, he opined, "It does not seem advisable for the Bureau to insist on a standard design for a marker for Federal Aid Projects, but," he continued, "a blue print is attached showing an acceptable design."⁷⁷ Although he could not insist on a design without wholly disrupting the state-federal cooperative arrangement, he still pushed a standard design. As with most other federally-pushed initiatives, states responded because uniformity along roads helped ensure safety and ease of travel. When states submitted their proposed designs for federal aid markers, the blueprints differed little, if at all, from the BPR's standard suggestion. Mississippi, for example, requested information on a satisfactory federal highway marker, the Bureau supplied a recommendation, the state complied. The District Engineer reported to MacDonald about the success: "This design, as you are aware, originated in this office and has been adopted by the State of

⁷⁷ Memorandum to All District Engineers from P.S.J. Wilson, July 16, 1928, "Memoranda to Dist. Engrs. & Div. Chiefs, 1928-1929" Item, 530/24/21/5/Box 3, BPR Series, RG 30, NARA-II.

Mississippi as prepared by us.”⁷⁸ Just as Mississippi used the BPR’s design on federal aid roads, the usage of the BPR’s design trickled down to state and local roads—locales that did not need the BPR’s approval. In most states, such as New Jersey and Texas for instance, all state highway markers, whether or not they were on federal aid roads, bore a striking resemblance (perhaps, identical copy) to the BPR’s recommendations.⁷⁹

Although BPR officials successfully used soft power to shape a uniform landscape, they recognized the limits of a cooperative stance. The BPR regularly noted the need for state compliance, even if done via legal mandate. MacDonald recommended to Congress, for example, “each State through its proper officials undertake to secure any necessary changes in State laws to permit of such uniform marking and such changes in existing schemes for numbering or designating roads as may appear necessary.”⁸⁰ Even after the BPR began mandating uniform signage on federal aid roads, the agency still gave a degree of power to the states, while maintaining supreme authority. If, for example, a state desired a sign that the BPR had not approved and designed, the state could submit a “request for such a sign [to] be made to the Bureau of Public Roads and a standard sign will be made in cooperation with the State requesting it.”⁸¹ The state, then, could expand the list of approved signs, but they had to work through the BPR. States complied with federal signage mandates, either through

⁷⁸ Correspondence from R.E. Toms to Thomas H. MacDonald on Mississippi Standard-Project Markers, May 22, 1925, “PSE – Apr., May., Jun.—1925” Folder, 530/22/27/7/Box 1735, BPR Series, RG 30, NARA-II.

⁷⁹ See the photos of Texas state highway markers, in “TX-13070 thru VT-7914” Item, Box 6, RG 30-R, NARA-II.

⁸⁰ “Department of Agriculture Federal Aid and National Forest Highways Annual Report to Congress, Fiscal Year Ended June 30, 1924” Item, 530/B/1/3/Box 1, BPR Series, RG 30, NARA-II.

⁸¹ Memorandum on Specification of Standardize Highway Signs and Markers, April 1, 1926, “Letters & Memo. to District Engineers & Chiefs of Div. Jan 4, 1924 to Jun. 24, 1927” Folder, 30/530/24/21/5/Box 2, BPR Series, RG 30, NARA-II.

local legislative action or the previously established power of the highway commission's engineer.

Beyond the manufactured aesthetics of highway landscaping, the BPR also pushed for a standardized program of roadside beautification. This was part of a plan by experts to make the highway system safer and longer-lasting. The rhetoric of safety, in addition to beauty, added further legitimacy to the expert advice on beautification. Indeed, by the late 1920s, state and national representatives had codified landscaping and beautification of highways. "The law provides for the inclusion," Chief Engineer Wilson reminded his field engineers, "of the cost of roadside planting in the estimates for federal aid projects."⁸² As landscaping became a part of federal appropriation road bills in the 1920s, it became a central component of New Deal labor projects. Unskilled laborers beautified roadsides. In a memorandum to all BPR District Engineers explaining the regulations of the National Recovery Highway Funds, the report explains: "It will be required that each State highway department include ... the appropriate landscaping of parkways or roadsides."⁸³ A program of landscaping, then, was dictated by the federal government and tied to the federal-aid funds. In a press release, the BPR noted how planting alongside highways contributed to greater employment.⁸⁴ The federal roadside beautification project, then, responded to public desires ensuring aesthetically pleasing roads and boosting employment.

⁸² Memorandum to All District Engineers from P.S.J. Wilson, October 11, 1928, "Memoranda to Dist. Engrs. & Div. Chiefs, 1928-1929" Item, 530/24/21/5/Box 3, BPR Series, RG 30, NARA-II.

⁸³ Memorandum to District Engineers, June 30, 1933, Box 8, Folder 42, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

⁸⁴ Press Release: Planting the Highway Becomes Part of a Road Job, "1936—File Copies" Folder, 530/24/22/1/Box 8, BPR Series, RG 30, NARA-II.

While road building became federally mandated with the increasing budget of highway and New Deal programs, beautification efforts were also carried out by private organizations. In lauding the efforts of many “civic organizations” that beautified the road through plants and foliage, the *International Highway Magazine* continued: “The idea that roadsides can be beautified ... swept over a considerable part of the country. People living by the road, in certain localities, have taken to themselves the task of setting out plants and shrubbery, to take away the monotony that would otherwise exist.”⁸⁵ The White House even convened a Conference on Natural Beauty to promote roadside development that conserved and displayed natural beauty.⁸⁶ Individuals could follow the lead of experts of landscaping, road design, and highway safety in beautifying the roads. The BPR even recommended specific plants for local climates to guide planting efforts. In Colorado, for example, the BPR experts recommended locals plant Siberian Elms instead of the Tamari Hispida and Populus Nigra Italiana that Coloradans had been planting.⁸⁷ The BPR tried to control and standardize the American roadside, through the environmental manipulation of the landscape and the manufactured signage.

A National Highway Map

A standardized and uniform numbering system secured a top-down national highway network, and it forced motorists to recognize the national nature of the highways. The 1923 USDA map laid a national vision for the nation’s engineers, yet

⁸⁵ “Beauty by the Road,” *International Highway Magazine* 1, No. 2 (August 1935), 53.

⁸⁶ John A. Jakle and Keith A. Sculle, *Motoring: The Highway Experience in America* (Athens: University of Georgia Press, 2008), 142.

⁸⁷ Correspondence to Hewes, May 5, 1926, “481—Colorado PS&E – 1935” Folder, 530/22/28/2/Box 2100, BPR Series, RG 30, NARA-II.

this did not always effectively translate to uniform legibility for the traveling public. The BPR worked through the AASHO to devise and announce this national highway numbering system. This cooperative process allowed the BPR to retain the image of an apolitical arbiter. However, the BPR did officially endorse and mandate the AASHO's numbering system. In 1925, the AASHO voted to switch from a disjointed, localized system of named and numbered roads to a uniform national numbering system. This transition represents the centralized authority—through the BPR and AASHO—gaining power from private organizations and the states. A legible and simplified map is a key tool of the state in re-ordering nature and society and cementing national identities and perspective. In the early years of road-building, private organizations often led localized pushes to build highways and roads, and they named these roads. These named roads promoted touristic and political interests, and roads such as the Lincoln Highway, Dixie Highway, Jefferson Davis Highway, and Old Trails Road dominated America's map until 1926.⁸⁸ The AASHO abolished all named highways, thereby eliminating the competition of interested highway groups. Beyond usurping local groups, the BPR also gained recognition for all highway programs across the country because of the national signage and numbering system. After proposing a unified system in 1925, the AASHO adopted a national map in 1926. This map and system has since governed the conception of American space.

⁸⁸ For an overview of early named roads, see: John A. Jakle, "Pioneer Roads: America's Early Twentieth-Century Named Highways," *Material Culture* 32, no. 2 (Summer 2000): 1-22. For a case study on how a private organization gained influence by claiming and naming public roads, see: Alexander Finkelstein, "The Politics of Space and Memory: The Jefferson Davis Highway in the West," *Preserving U.S. History: Memorializing Contested Events*, ed. Melissa M. Bender and Klara Stephanie Szlezák (Forthcoming, press TBD).

The USDA accepted the AASHO's proposal and then encouraged states to follow the department's resolutions. While the USDA could mandate the renaming and rebranding of federal aid system roads, they had to rely on their soft power and influence to get states to comply on non-federal aid roads. The fact itself that the AASHO proposed and implemented a new organizational system for highways across the country speaks to the power of the organization and its leadership, who came from the BPR. The AASHO, for example, announced that "the States be requested to make every attempt to erect the number signs on the United States selected routes ... [and] erect the Standard Shield signs."⁸⁹ In addition to laying out a map, the AASHO also released standard designs for highway signs. Although the AASHO did not have any legislative authority to require states to erect uniform signs following the national numbering system, the organization's membership was comprised of the leading highway decision-makers of each state and the BPR. States complied with the national standards, both numbering and signage. Within a year of the AASHO promulgating numbering and signage standards, 22 states completely marked their systems, 14 did so partially, and 6 additional states expected to commence and complete the work within the season; 42 states, then, immediately took up the AASHO's call to create a national system.

In deciding on the national numbering system, the AASHO demonstrated how power was consolidated in their hierarchical organization. Moreover, it shows how the BPR employed an outside organization composed of diverse yet influential supporters to augment its power. The Executive Secretary sent a letter to all State Highway Departments with six policies "adopted and strictly adhered to" that reiterate how states

⁸⁹ Minutes of American Association of Highway Officials Executive Committee Meeting, Jan. 14, 1926, Box 15, Folder 49, Series 3: Other Federal, THM Collection, Cushing Library, TAM.

ought to institute the numbering system. The first policy noted that “U.S. numbered routes once having been established, will not be changed to accommodate a request made by a State Highway Department,” underlining the primacy and power of the national decision. These recommendations also created a hierarchy that vested power in the levels of governance: the AASHO only heard petitions from State Highway Departments, not “outside organizations or people locally interested,” who would have to petition the State Highway Departments. In this map-making process, the AASHO also demonstrated the importance of the organization by delegating issues below it: “The association is not interested in the selection of any U.S. route or part of a route to be given the name of some character or incident in American history and therefore such a matter must be handled entirely by the State Legislatures in the States involved.”⁹⁰ By delegating this issue, the AASHO deemed the naming of routes trivial and beneath the national organization. Indeed, the AASHO wielded power in highway decisions, and they literally re-designed the American landscape.

The hierarchy through which the federal government worked allowed the standardization process to be centralized. As the highway numbering process illustrates, the BPR established levels of power, enabling agents through which it acted. Creating a hierarchical bureaucratic structure allotted the federal government both power and prestige, while allowing it to stay out of the fray of local politics. In originally articulating the goals of the federal aid program, Logan W. Page noted: “The Federal Aid Act recognizes the State as the smallest unit with which the Federal Government

⁹⁰ Communication from American Association of State Highway Officials Executive Secretary to All State Highway Departments, Jun. 18, 1929, Box 15, Folder 49, Series 3: Other Federal, THM Collection, Cushing Library, TAM.



Figure 2.5: In 1925, the AASHO proposed a uniform numbering system for the nation's highway. This program usurped power of local naming and numbering systems. Source: Interstate Highways 1925, Folder 4, Series Maps of Highway System, RG 30, NARA-II.



Figure 2.6: In 1926, the USDA adopted the AASHO's proposed map as the official numbered highway map of the United States. Source: US Highway Map 1926, Folder 4, Series Maps of Highway System, RG 30, NARA-II.

shall deal.”⁹¹ This ideal governed the relationships of the highway bureaucracy: the BPR centralized power, then worked with the states, who worked with local governmental units. This power structure ensured an effective and efficient communication model that could coordinate projects across the nation. The BPR enacted a program of standardization through the state engineers and the expertise of national organizations, such as the AASHO. This hierarchy permitted the BPR to take credit for the overarching success of the national highway program, while delegating the responsibility to inform local entities of disappointing decisions.

Acting as the BPR’s agents in this hierarchy, the AASHO and states instituted a national map, elevating the status of the federal program. Since 1926, Americans have



Figure 2.7: The BPR released this photo of how they replaced inconsistent signage with those of a national standard, an aesthetic representation of national uniformity. Source: NARA-II: 119-M-1A-45.

⁹¹ Correspondence from L.W. Page to S.E. Bradt of Illinois State Highway Department, October 3, 1916, “Illinois General July 1, 1916 to Dec. 31, 1916” Folder, 530/22/31/2/Box 2250, BPR Series, RG 30, NARA-II.

known their highways by the numbered system. In his analysis of the importance of road maps in defining the American landscape, James R. Akerman notes that the “automobile road map was America’s national blueprint.”⁹² Since 1926, the federal government has controlled that automobile map, and thereby controlled the way that Americans interact with their landscape. Indeed, this served as a representation of the power given to the “fourth branch of government” led by the most educated experts. They, according to the public and state commissions, had the power to institute a program, and they did so. Within a few years of the transition, BPR field engineers took responsibility for inspecting state highway markers to ensure compliance with the AASHO standards. Because of “the apparent lack of uniformity in the matter of erecting standard markers and signs onto the U.S. Numbered Highways,” MacDonald requested detailed inspection reports from his field engineers.⁹³ Federal aid administrators used these reports to prod states into compliance. Ultimately, every state complied, and state and federal officials have since maintained the principles laid out in 1926.

Conclusion

As the public grew to expect good roads from their government, the federal government took responsibility for leading the good roads charge. Within the federal government, the highway bureaucracy—led by respected and powerful expert engineers—forged an ideal national highway system. Analyzing the growing

⁹² James R. Akerman, “Twentieth-Century American road Maps and the Making of a National Motorized Space,” in *Cartographies of Travel and Navigation*, ed. James R. Akerman (Chicago and London: The University of Chicago Press, 2006), 153.

⁹³ Circular Letter to District Engineers from Chief of Bureau, June 15, 1929, “Memoranda to Dist. Engrs. & Div. Chiefs, 1928-1929” Item, 530/24/21/5/Box 3, BPR Series, RG 30, NARA-II.

importance of the highway bureaucracy, one study noted: “By thus confining future highway improvements to a logical, defensible plan based on the attainment of maximum general benefit within the limits of ability to pay, the effect of the subversive elements usually involved in the selection and priority of such improvements is minimized.”⁹⁴ Indeed, the highway engineers touted a rhetoric of apolitical, scientific expertise that allowed them to gain power in the form of public trust and support. The engineers gained power over more than just the “subversive elements,” but also local politicians, businessmen, and local good roads organizations. MacDonald believed engineers held a responsibility to the public, and through proper planning and research, they could enact a complete policy. Laying out the “Responsibility of the Bureau,” MacDonald invoked “the prestige which accrues to this Bureau” because of the organization’s position and efforts. He wrote: “our organization as a whole must be absolutely honest and fair. It should be competent. It should be broad and above personalities in its dealings with the public generally and individually. These qualifications should be expressed and exerted tactfully and courteously.”⁹⁵ The BPR, MacDonald believed, could accrue power through tactfully displaying its honesty and fairness—fairness he defined through scientific, apolitical efficiency.

Through the rhetoric of efficiency and safety, the experts enacted a uniform highway policy throughout the country, eliminating much local variation. This uniform policy manifested in standardized engineering specifications, aesthetic (landscaping and signage) consistency, and enactment of model laws at the state levels. Although the

⁹⁴ Analysis of Virginia, “Virginia Motor Vehicle Analysis” Folder, 30/530/24/22/6/Box 14, BPR Series, RG 30, NARA-II.

⁹⁵ The Responsibility of the Bureau, “Policy Extracts Mch. 4 to July 30 1920” Item, 530/24/21/5/Box 5, BPR Series, RG 30, NARA-II.

goals of efficiency and safety truly are central to any highway program, they helped justify more than a safe highway system; they bolstered a newly cemented federal-state-industry power dynamic. Explaining the importance of national standardization to the Chairman of the Ways and Means Committee and a member of the American Engineering Standards Committee, MacDonald noted, “Between most of our States there is no natural boundary.”⁹⁶ Because there is no natural boundary, Americans and tourists crossed state boundaries, unified under the auspices of the United States. Therefore, MacDonald declared, America required national standardization. Government engineers carried out this program of standardization, which differentiated it from previous trends of standardization.⁹⁷

National highway engineers carried out their program, and they gained the support of the public because they oversaw the development of an effective, coherent highway system. Although federal legislators in both 1916 and 1921 had chosen a federal aid model over a national highway system, the Bureau of Public Roads essentially instituted the latter. While maintaining some vestiges of power within state decision making apparatuses, federal administrators and engineers accrued power and prestige within state highway departments and in the eyes of the public. States called on national administrators to guide a program, and eventually a systematized national program created “the Great American Landscape,” a landscape replete with uniform signage, landscaping, laws, and construction methods and materials. Modern statecraft,

⁹⁶ Correspondence from Chief of Bureau to Albert Whitney, Dec. 30, 1921, “P S & E Bundle,” 30/530/22/17/7/Box 1738, BPR Series, RG 30, NARA-II.

⁹⁷ In the Railroads, for example, the standardization of the rail gauge came through the coordination of leading businessmen, not government mandate. See, Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: W.W. Norton & Company, 2011).



Figure 2.8: “Mud at the State Line” shows how good roads is not a local issue, but a national issue because of the interstate traffic. Source: NARA-II 119-M-1A-27.

James Scott argues, relies on a re-ordering of society in which identity and knowledge is centralized and uniform: “A thoroughly legible society eliminates local monopolies of information and creates a kind of national transparency through the uniformity of codes, identities, statistics, regulations, and measures.”⁹⁸ A federal bureaucracy helped institute a national infrastructure project by linking and guiding states and engineers. The federal highway bureaucracy grew because it demonstrated that the lack of natural borders between states and the need for a national linkage required a responsible, efficient agency.

⁹⁸ Smith, *Seeing Like a State*, 78.

Chapter III: The Rhetorical Power of American Exceptionalism

“Since writing this I have been in Belgium, Holland, Germany, and back to Holland ... While the highways of these countries cannot compare to ours, the old roads which have been built up through the ages carry the load without failure, and while the bridges were excellent nearly all of them have been destroyed now.”
Colonel John W. Wheeler, Jan. 1945¹

Highway engineers, politicians, and automobile advocates all asserted the need for a fully developed highway system in terms that contributed to and reflected notions of American exceptionalism. Through World War II, many who advocated for building highways presented a developed road system as an emblem of civilized, developed nations. An analysis of the narratives employed to champion the highway system reveals how a competitive international spirit shaped American policy and action. In this chapter, I argue that the highway became a symbol of American exceptionalism through its place in three primary civic narratives. Shifting from the institutional and policy consequences of road development, this chapter turns to the Good Roads Movement itself, attempting to unravel the narratives and themes that made the roads advocates so effective.

Highway advocates relied on this rhetorical exceptionalist trope to promote the highway as a means to assuage popular anxieties. First, policy makers often invoked historical empires to show the necessity of lasting roads. This rhetoric placed America, through a developed road system, on a trajectory that equated the country’s achievements to those of the Roman Empire and other historical powerhouses. Second, highway engineers and advocates compared American highways to those of other

¹ Correspondence from John W. Wheeler to Thomas H. McDonald, January 1, 1945, Box 11, Folder 26, Series 2: Inter Agency, Thomas H. MacDonald Collection, Cushing Memorial Library & Archives, Texas A&M University Libraries (hereafter: THM Collection, Cushing Library, TAM).

industrialized countries. Highway engineers participated in transnational informational sharing forums, asserting American technocratic supremacy on a global stage. By noting the ways in which America's highways surpassed other nations' and the ways in which America could further improve, these advocates engaged in an international discourse in which countries jockeyed for primacy in infrastructure development. Lastly, highway advocates invoked national defense as a central justification to build highways. The narrative of national defense, especially between WWI and WWII, reveals how military experts and the public considered highways a vital component of national strength. History, international competition, and military might, then, all comprised components of a discourse of national power. These three narratives played prominently as vehicles to define and assert America's power on the international stage. This chapter does not argue that America or its highway system were indeed exceptional; rather, it argues that the intellectual and cultural notion of national exceptionalism was an important factor in the justification for building America's highways.

The highways and their narratives ought to be understood as a product of their time, and these narratives allow for a deeper understanding of the broader cultural milieu. The Good Roads Movement developed just as Frederick Jackson Turner delivered his famous 1893 Frontier Thesis. In this thesis, Turner claimed that America's frontier had closed and that the free land and westward movement "explain[ed] American development."² As historian David Wrobel notes, the closing of the Western "safety valve" during the 1880s and 1890s encompassed anxieties pervasive throughout

² Frederick Jackson Turner, "The Significance of the Frontier in American History" in Frederick Jackson Turner, *Rereading Frederick Jackson Turner: "The Significance of the Frontier in American History" and Other Essays*, ed. John Mack Faragher (New York: Henry Hold and Company, 1994), 31.

society: politicians, economists, and reformers all fretted over the demise of the frontier.³ By the turn of the twentieth century, “‘Postfrontier’ anxiety, in fact, was as important a part of the cultural milieu” as the previous frontier anxiety had been.⁴ By 1910, even Turner searched for ways to preserve America’s exceptional democratic spirit. In his presidential address to the American Historical Association, Turner expressed his hope that enlightened government might ensure the legacy of the frontier and sustain American ideals.⁵ Because of the social and intellectual context of “postfrontier anxiety,” coupled with the new issues involved in becoming an empire, many Americans sought a means to appease their concerns.⁶ Highway advocates invoked American exceptionalism as a product of, as well as guide to, dealing with uncertain and new times in American history. Indeed, one intellectual historian characterized Americans of the early twentieth century as “a nervous generation,

³ David M. Wrobel, *The End of American Exceptionalism: Frontier Anxiety from the Old West to the New Deal* (Lawrence: University Press of Kansas, 1993).

⁴ *Ibid.*, 85.

⁵ Frederick Jackson Turner, “Social Forces in American History” in *American Historical Review* 16, no. 2 (1910): 217-33.

⁶ After the Spanish-American War, Americans had to grapple with the responsibilities and realization that the nation was becoming an empire. For a discussion of America administering a “colonial state” in the Philippines with a racial aspect to empire, see: Paul Kramer, *The Blood of Government: Race, Empire, the United States, and the Philippines* (Chapel Hill: University of North Carolina Press, 2006). For a discussion of public perceptions of American responsibility after the Spanish-American War and a review of the historiographical evolution of these perceptions, see: Louis A. Pérez, Jr., *The War of 1898: The United States & Cuba in History and Historiography* (Chapel Hill: University of North Carolina Press, 1998). For a historiographical discussion of America’s role as an empire and the responses to such states, see: Paul A. Kramer, “Power and Connection: Imperial Histories of the United States in the World,” *American Historical Review* 116, no. 5 (Dec. 2011): 1348-91. Ian Tyrrell re-focuses the discussion of American international influence beyond the formal colonial control, noting: “1898 gave shape and spur to an already-evident American concern with the nation’s international connections and its place as a newly important world power.” Ian Tyrrell, *Crisis of the Wasteful Nation: Empire and Conservation in Theodore Roosevelt’s America* (Chicago: The University of Chicago Press, 2015), 14.

groping for what certainty they could find.”⁷ Peter Onuf argues that “what makes Americans exceptional is ... their self-conscious and self-defining embrace of American exceptionalism throughout their history.”⁸ Indeed, Onuf argues that the debate and embrace of exceptionalism reveals America’s cultural zeitgeist, and this exceptionalism enabled highway advocates to gain momentum.

The government won expanded and legitimated constitutional powers concerning road building because good roads were popular. Historians have noted the many points highway advocates invoked to argue for road building, yet have overlooked the trope of national power. Instead of focusing on this intangible ideal representative of the era’s political and cultural context, many of the scholars who have covered the subject focus on the tangible rural and urban promotional campaigns. This chapter builds on existing automobile and highway scholarship by adding another dimension to the Good Roads Movement—the trope of American exceptionalism. In documenting the many “common interests [of] rural famers, city drivers, and automobile industrialists,” one historian notes the “exceptional” alliance of diverse interests that comprised the Good Roads Movement.⁹

The Good Roads Movement began not with motorists but with cyclists in the late nineteenth century. A group of cyclists in 1880 formed the League of American Wheelmen. League members rode together, advocated for roads, and published *Good*

⁷ Roderick Nash, *The Nervous Generation: American Thought, 1917-1930* (New York: Rand McNally and Co., 1970), 4.

⁸ Peter S. Onuf, “American Exceptionalism and National Identity.” *American Political Thought* 1, no. 1 (2012): 77–100.

⁹ Tammy Ingram, *The Dixie Highway: Road Building and the Making of the Modern South, 1900-1930* (Chapel Hill: University of North Carolina Press, 2014), 15.

Roads Magazine. As I.B. Holley, Jr. argues: “Frequent tumbles from the highwheelers caused by rutted roads awakened a serious interest in efforts at encouraging the movement for better highways.”¹⁰ While the League of American Wheelmen’s membership mainly consisted of wealthy urban joyriders, they crafted their argument for good roads to reach the rural community. The rural community needed this targeted promotion because most roads would be built outside of cities. Rural dwellers initially fought highways because of the noise, dust, and costs. The farmers saw road expenditures as an undue burden that disproportionately benefited wealthy urban motorists.

Highway advocates reached the rural demographic by couching their new argument for roads in positive economic and social terms. Isaac B. Potter’s *The Gospel of Good Roads: A Letter to the American Farmer* (1891) crystallized the argument to the farmer.¹¹ Potter declared: “the road question is far and away the most important one to the American farmer to-day,” and he contended that the farmer should be interested in good roads because of the financial benefits of the new and easier means of transporting goods to market.¹² The economic argument to farmers was simple: “investing in modern farm equipment and investing in good roads” are directly analogous.¹³ The return on investment in farm-to-market roads, Potter and other highway boosters argued, greatly benefited farmers. Beyond the argument that a farm-

¹⁰ I.B. Holley Jr., *The Highway Revolution, 1895-1925: How the United States Got Out of the Mud* (Durham, NC: Carolina Academic Press, 2008), 6.

¹¹ Isaac B. Potter, *The Gospel of Good Roads: A Letter to the American Farmer* (New York: The League of American Wheelmen, 1891).

¹² *Ibid.*, 9.

¹³ Christopher W. Wells, *Car Country: An Environmental History* (Seattle: University of Washington Press, 2012), 29.

to-market road helped farmers' business, historians have noted the positive social component of the argument. Historians have aptly articulated the ways in which good roads would improve the social well-being of rural farmers, including better education opportunities and more communal religious options. Moreover, Tammy Ingram argues that the Good Roads Movement in the South, which had lagged behind the rest of the country, served as a vehicle of modernization to bolster the region's uncultivated industrial capability.¹⁴

While the gospel of good roads targeted rural farmers, it also sought to reach wealthier urbanites. Good roads advocates, especially after the fad of cycling passed, directed their message to the urban motorist. With the democratization of the automobile—largely thanks to Henry Ford's affordable Model T (1912)—came a more robust call for better roads. These motorist advocates, however, did not call for farm-to-market roads; they called for pleasure roads. Automobile and touring clubs advocated for good roads for the pleasure seeker. John A. Jakle and Keith A. Sculle describe the ways in which automobile clubs lobbied for better roads.¹⁵ The argument also included an economic component of commercial touring: automobiles could bring money through tourism.¹⁶ This tourism, politicians and industrialists argued, also united the nation by helping to bolster a national marketplace. In her study of the development of food and culture, for instance, Donna R. Gabaccia traces the impact of a national road system on both the development of a national culinary identity and the growth of the

¹⁴ Ingram, *The Dixie Highway*.

¹⁵ John A. Jakle and Keith A. Sculle, *Motoring: The Highway Experience in America* (Athens: University of Georgia Press, 2008), especially 34-39.

¹⁶ Marguerite S. Shaffer, *See America First: Tourism and National Identity, 1880-1940* (Washington, D.C.: Smithsonian Institution Press, 2001), especially 130-168; Ingram, *Dixie Highway*.

industrial food economy.¹⁷ Scholars, then, have elucidated the urban and rural social and economic justifications for road building.

Targeting urban motorists and rural farmers gave the movement initial momentum, and World War I catalyzed a more fervent and widespread call for good roads. With travel to Europe stymied, for instance, the “See America First” movement blossomed, especially focusing on automobile tourism in the West and South.¹⁸ In addition to the expanding tourist industry, the trucking industry formed. During WWI, the army heavily utilized the railroads, and the truck industry presented itself as the logical alternative and solution, especially with the development of more powerful automobiles. Truckers, then, also joined the good roads coalition. With truckers came the producers, whose goods went by trucks, including western agriculturalists and southern textile workers. Moreover, the number of individual motorists who called for good roads expanded dramatically. Automobile ownership grew exponentially, ballooning from fewer than one million registered cars in 1912 to over 20 million by 1925.¹⁹ Indeed, this trend continued: by 1931, the ratio of cars to people stood at 1:5.5, less than half the ratio of a decade prior: 1:11.6.²⁰ Beyond these civilian arguments for good roads, the military, too, joined the coalition. Highways, the military argued, were fundamental for national security, and with national security came national supremacy.

¹⁷ Donna R. Gabaccia, *We Are What We Eat: Ethnic Food and the Making of Americans* (Cambridge, Mass.: Harvard University Press, 1998).

¹⁸ Shaffer, *See America First*.

¹⁹ United States Department of Transportation—Federal Highway Administration, *Highway Statistics 1984*, available at: <https://www.fhwa.dot.gov/policyinformation/hsspubsarc.cfm> accessed October 25, 2017.

²⁰ *Recent Social Trends in the United States: Report of the President's Research Committee on Social Trends, With a Foreword by Herbert Hoover, One Volume Edition* (New York: McGraw-Hill Book Company, Inc., 1933), 173.

The national security argument was part of the greater discourse promoting American strength.

Although the economic and social arguments played an important role in justifying America's highway expenditures, the powerful rhetoric of American exceptionalism cannot be overlooked, both as a key component of early twentieth century American zeitgeist and as an important political tool in boosting infrastructure investment. In arguably the first major address on good roads by a sitting president, Theodore Roosevelt wrote: "The faculty, the art, the habit of road building marks in a nation those solid, stable qualities, which tell for permanent greatness." Roosevelt went on to say that it was a matter of "national humiliation that there should be so little attention paid to our roads."²¹ The discourse of American exceptionalism through roads underlay highway advocacy, and it is an important narrative to discuss in the context of the early twentieth century, a period in which American exceptionalism became the dominant cultural currency.

Before delving into the ways in which the rhetoric of American superiority was used as a tool in the highway movement, it is important to contextualize the movement to assert American exceptionalism. Exceptionalism was invoked because it had currency in the cultural milieu. Advocates of highways emphasized, as Ian Tyrrell defines it, a "nation-centered historical tradition . . . with its emphasis on the uniqueness of all national traditions" to justify highway building.²² American exceptionalism, as

²¹ Theodore Roosevelt, "National Development and Good Roads," *Good Roads*, June 1903, 226-227.

²² Ian Tyrrell, "American Exceptionalism in an Age of International History," *The American Historical Review* 96, no. 4 (Oct. 1991): 1031.

Jason A. Edwards determines, “is the belief that the United States is unique among, if not superior to, other nation-states.”²³

Henry Ford, arguably the pre-eminent symbol of the automobile age and its associated period of highway building, regularly articulated a vision of American exceptionalism.²⁴ Although Ford, along with many of his contemporaries, used explicitly racist and anti-Semitic language, he connected nationalism to progress.²⁵ In his newspaper, the *Dearborn Independent*, Ford declared: “No one can contemplate the nation to which we belong without realizing the distinctive prophetic character of its obvious mission to the world.... We are the road-builders. We are the guides, the vanguards of Humanity.”²⁶ Ford invoked a trope commonly employed: America must guide the world with its superior technology and road-building capability. Ford’s “road-builder” metaphor worked because Americans understood both the literal and figurative connotations. America’s road building and pioneer spirit, Ford argued, made the nation exceptional and through this progress recaptured the American ideals of the age of frontier exploration, conquest, and settlement.

²³ Jason A. Edwards, “An Exceptional Debate: The Championing of and Challenge to American Exceptionalism,” *Rhetoric and Public Affairs* 15, no. 2 (Summer 2012): 351-367.

²⁴ For a fuller picture of Ford, his work, and his ideology, see: Douglas Brinkley, *Wheels for the World: Henry Ford, His Company, and a Century of Progress* (New York: Penguin Books, 2003).

²⁵ Based in theories of Scientific Darwinism, many Americans believed in a nationalist superiority based in the hereditary line of the “Nordic stock.” For an excellent picture of the pervasiveness of this scientific racism throughout many aspects of American culture through an analysis of Madison Grant, see: Jonathan Peter Spiro, *Defending the Master Race: Conservation, Eugenics, and the Legacy of Madison Grant* (Burlington, VT: University of Vermont Press, 2009). For the connection between conservation, racial decay fears, and scientific racism in American history, see: Miles A. Powell, *Vanishing America: Species Extinction, Racial Peril, and the Origins of Conservation* (Cambridge, Mass.: Harvard University Press, 2016).

²⁶ Henry Ford, “A Nation of Pioneer Blood,” in *Ford’s Ideals: Being a Selection from “Mr. Ford’s Page” in The Dearborn Independent* (Dearborn, MI: The Dearborn Publishing Company, 1922), 148.

This chapter does not argue that American highway building was exceptional in an international comparative context. Though Americans invoked a nation-centered exceptionalism, a meaningful comparison would have proven difficult. In England, the nation to which America most frequently compared itself, only about 10 percent of the population owned cars in 1939, a ratio that America surpassed nearly two decades earlier. Similarly, very few Germans owned cars in the 1930s. The Third Reich and Adolf Hitler enlisted the help of Ferdinand Porsche to develop the “Strength Through Joy car,” the precursor to the VW Beetle, paired with the government investment in the Autobahn. As part of the *Volksgemeinschaft*, the ideology of a “people’s community” that delivered on promises of common well-being and material goods, the German government built the Autobahn to increase car ownership and modernize the nation. As a state project, the Autobahn represented part of the nation’s “architecture of power.”²⁷ Germany’s Autobahn offered the easiest comparison to the American system, yet it also differed in that the project was solely administered by a central bureaucracy and it focused on connecting only major metropolitan centers.²⁸ Instead of contrasting the American system with its contemporaneous foreign counterparts, this chapter follows the intellectual underpinnings of domestic highway rhetoric, examining the language and themes employed. This analysis reveals how Americans responded to, and employed, a nation-centered trope in politics, elucidating a process of national identity

²⁷ Wolfgang Schivelbusch, *Three New Deals: Reflections on Roosevelt’s America, Mussolini’s Italy, and Hitler’s Germany, 1933-1939*, trans. Jefferson Chase (New York: Metropolitan Books, 2006), 170-172.

²⁸ Address: “Contrasting United States and European Practices in Road Development,” Dec. 5, 1938, Box 6, Folder 199, Series 1: Personal, THM Collection, Cushing Library, TAM.

formation through physical manifestations of superiority.²⁹ Seymour Lipset demonstrated how the term “American exceptionalism” evolved from Alexis de Tocqueville’s notion of simple difference to include connotations of superiority throughout American development and the nation’s changing role in the world.³⁰ Highway advocates used rhetoric that sought to connote superiority in national power and historical relevance through the highway system. The nationalist psychological argument for highways must be studied to fully grasp why highways were built and what they symbolized; the intellectual justification of the system is a crucial mode of analysis, as it embedded cultural meaning and significance in the highways themselves.

American leaders touted highway progress to show national power and primacy. Just as rural and urban citizens became vested in the highways for economic and social reasons, political leaders used the highway for reasons for power. Over the first few decades of the twentieth century, a transnational dialogue of improvement encompassed the jockeying for international power.³¹ Countries on both sides of the Atlantic watched one another, and the highways represented an arena for competition, through which national spokespeople flaunted success. Space is socially constructed and laden with representative meaning.³² The highways’ intellectual and cultural discourse reveals how this infrastructure project came to represent the early twentieth century.

²⁹ The framework for interpreting the discourse as a process of identity formation is found in Peter S. Onuf, “American Exceptionalism and National Identity,” *American Political Thought* 1, no. 1 (Spring 2012): 77-100.

³⁰ Seymour Martin Lipset, *American Exceptionalism: A Double-Edged Sword* (New York: W.W. Norton & Company, 1997).

³¹ Daniel T. Rodgers, *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge: The Belknap Press of Harvard University Press, 1998).

³² Henri Lefebvre discusses the process of building and experiencing social space, which is subsumed in the idea of social and spatial politics. His concept of space stands on a tripartite process, involving spatial practice, representations of space, and representational space. For a full discussion on the

Good Roads and Historic Civilizations

American exceptionalist discourse centered on a belief that great empires achieved success through their road systems. Highway advocates grounded this narrative in a comparison between America and great empires of antiquity. In his 1903 *Good Roads* address, President Theodore Roosevelt set the foundation for the mythic importance of good roads and historical power. Roosevelt opened his message by asserting: “When we wish to use descriptive adjectives, fit to characterize great empires and the men who made those empires great, invariably one of the adjectives used is to signify that that empire built good roads.”³³ When Roosevelt linked good roads to great empires, he laid the groundwork for the discourse that highway advocates embraced and echoed. Over the first four decades of highway building, highway supporters regularly returned to the motif Roosevelt established: good roads as a hallmark of great empires and power.

Roosevelt used this historical analogy to align America’s destiny with that of Rome at the height of its power. His historical and foreign parallel appeared frequently, with highway advocates regularly asserting the highways as ways to ensure America’s permanence and power. Roosevelt further explained the connection in his 1903 address:

Merely from the standpoint of historical analogy we should have a right to ask that this people, this people which has tamed a continent, which has built up a country with a continent for its base, which boasts itself with truth as the mightiest republic that the world has ever seen, and which we firmly believe will in the century now opening rise to a place

production and meaning of space, see: Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Cambridge: Blackwell Publishers Inc., 1991). On the construction of space for political and social purposes, also see: Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (New York: Verso, 2006).

³³ Roosevelt, “National Development and Good Roads,” 234.

of leadership such as no other nation has ever yet attained; merely from historical analogy, I say, we should have a right to demand that such a nation build good roads.³⁴

Thomas MacDonald, a leading highway booster and longtime chief of the BPR, built on Roosevelt's historical analogy as a means to promote America's highway program and accrue public support. MacDonald often returned to a speech promoting highways entitled "Two Thousand Years of Road Building." Although he catered the specifics of the speech to each particular audience, the broad strokes remained consistent. "As I read history," MacDonald informed his crowd, "I find it an absorbing pursuit to speculate upon the effect of transportation in shaping our destinies as a nation." This speech rearticulated the rhetorical framework that advocates of highways



Figure 3.1: This image shows the Appian Way in Italy with ancient Roman ruins in the background. It was printed by *Southern Good Roads* magazine to show the permanence and legacy of Rome through their road program. *Southern Good Roads*, June 1910, page 5.

³⁴ Ibid.

and exceptionalism echoed. He began by declaring that “There have been just three great programs of highway building within recorded history.” The first “great program” was that of the Roman Empire from Julius Caesar to Constantine; the second was France under Emperor Napoleon; and the third “That of the United States during the past decade.” MacDonald went on to assert how “the experiences of civilization in the older countries ought to have much of value in formulating broad plans for the future.” MacDonald then delved into the lessons that the roads of historical empires teach, and ended with a prescription for future highway building.³⁵

MacDonald linked the history of road building and great civilizations in order to illuminate the ways in which America could be, or already was, exceptional. Moreover, he played into national notions of self-grandeur to secure further support for his bureau’s agenda. Following in the footsteps of Roosevelt two decades later, MacDonald proclaimed his belief—a somewhat contentious claim in the 1920s³⁶—that America was a world leader. The leadership, however, came in the tradition of Roman martial and economic dominance. MacDonald built on the connection between America’s future and Rome’s past that a pro-roads magazine editor drew explicitly: “The Roman roads are still the marvel of a modern world and are still used. Nothing contributed more to

³⁵ MacDonald gave variations of this speech throughout his tenure as Chief of the Bureau of Public Roads, which began in 1919. The quotations above come from the delivery: Speech at the Twelfth Annual Meeting of the American Association of Highway Officials entitled “Two Thousand Years of Road Building,” Nov. 8, 1926, Box 6, Folder 76, Series 1: Personal, THM Collection, Cushing Library, TAM.

³⁶ Following World War I, America divided over isolationists and globalists. A key example of the country’s retraction from the stage of global leadership is the failure of the Senate to ratify the Treaty of Versailles, which included membership in the League of Nations. For a discussion of the growing role of America as a global leader, despite internal national dissent, see: Frank Costigliola, *Awkward Dominion: American Political, Economic, and Cultural Relations with Europe, 1919-1933* (Ithaca: Cornell University Press, 1984).

Rome's prosperity and prowess than these imperial highways."³⁷ America, too, could be exceptional in the tradition of ancient Rome because of its highways. Through good roads, MacDonald and his fellow highway advocates contended, Americans cemented their legacy as the world leader. This nationalist rhetoric was not intended to assert the nation's absolute uniqueness; instead, it drew parallels between renowned empires of the past and the potential of America's future. The uniqueness in this rhetoric implied separation from global contemporaries: although other countries were building roads, he argued, only America's compared to the greatest roads in history.

While MacDonald traced the history of successful roads only to the Roman Empire, other advocates made broader historical connections, highlighting the timelessness of solid infrastructure development and the meaning of roads to progress. Highway advocates, following Teddy Roosevelt's precedent, invoked the historical lessons taught by roads regularly throughout the early twentieth century. Logan W. Page, the first Director of the Office of Public Roads, connected ancient empires and good roads in his popular tract, *Roads, Paths and Bridges* (1912). Page opened his manuscript with a short narrative of civilization's progress; his opening line declared, "Savage man built no roads." However, as man progressed, he began to make trails, which became "our first primitive roads." Finally, "At a later stage in human development," civilized men, such as Babylonians, Greeks, and Romans set the example of good road building. It is largely for their roads, Page argued, that we remember and

³⁷ Henry Branson Varner, "The Duty of the Press in the Good Roads Movement in the United States," *Southern Good Roads*, March 1910.

laud these civilizations.³⁸ Page connected good roads to human progress, a connection his contemporaries could link to popular ideas of racial anxiety and modernization. While Page proffered broad claims about road history and power, Leigh Irvine, another writer and road advocate, refined Page's history and built on Roosevelt's earlier articulated foundation. In his highway argument, *Golden Roads: The Good Road is the Golden Road* (1916), Irvine also employed the concept of historic relevance. Good roads, Irvine argued, were used "by Pharaoh to convey stones for the construction of the Pyramid 4,000 B.C.," and Carthaginians c. 600 B.C. constructed a system of roads that "became a rival of the Roman Empire."³⁹ America, he declared, must follow in that tradition of historical greatness. These highway advocates drew parallels to great empires of past, empires with strictly centralized hierarchical power structures. Beyond the parallel of a powerful state, these historical empires also relied on unfree labor to build their roads, just as America largely used convict laborers (see Chapter Five).

Like Irvine, Page, Roosevelt, and MacDonald did, early highway-related manuals, bulletins, magazines, and promotional tracts regularly paid respect to the ancient civilizations that left their respective marks. These historical analogies reinforced America's relation to the great historical powers. Tracing historical roots of power and highway building helped alleviate the period's postfrontier anxiety, as well as racial anxiety. During this period of mass immigration into America, Euro-Americans worried about racial mixing, and they crafted pseudo-scientific and historical narratives

³⁸ Logan Wallace Page, *Roads Paths and Bridges* (New York: Sturgis & Walton Company, 1912), 3-37.

³⁹ Leigh H. Irvine, *Golden Roads: The Good Road is the Golden Road, abridged edition* (San Luis Obispo, Cal., 1916), 18-19.

about superiority. For example, Madison Grant's bestselling *The Passing of the Great Race* (1916) traced the superior Nordic stock back to the Roman conquerors.⁴⁰ Similarly, the transition from "savage" to "civilized" through the development of roads reminded Americans of their alleged success taming the West and its Native American populations. The year before Logan Page published his theory on the civilizing effects of roads, Ishi "the last wild Indian" emerged in Northern California and became a national sensation highlighting the contrast between American modernization and traditional Native American lifeways.⁴¹ The highways, then, offered another outlet to ameliorate anxiety and declare American superiority—technical, historical, and racial.

Just as Madison Grant voiced his unease with the deterioration of American society because of the new immigration from southern and eastern Europe and as MacDonald traced the power derived from roads through history's great empires, the

⁴⁰ For an overview of pseudo-scientific racism and the eugenics movement through the lens of Madison Grant and his cohort, see: Spiro, *Defending the Master Race* and Powell, *Vanishing America*. For an overview of the eurgencis movement in the United States and its consequences, see: Alexandra Minna Stern, *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America* (Berkeley and Los Angeles: University of California Press, 2005). For an overview of the changing ideas of race and science in America, see: John S. Haller, *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority* (Urbana and Champaign: University of Illinois Press, 1971). For the manifestation of xenophobic ideals in American policy, see: Mae M. Ngai, *Impossible Subjects: Illegal Aliens and the Making of Modern America* (Princeton: Princeton University Press, 2004). For the shifting ideals of whiteness in America, especially concerning attitudes towards European immigrants, see: Matthew Frye Jacobson, *Whiteness of a Different Color: European Immigrants and the Alchemy of Race* (Cambridge: Harvard University Press, 1988). For an original best-selling book that encompasses the ideas of the twenties, see: Madison Grant, *The Passing of the Great Race; or, The Racial Basis of European History* (New York: Charles Scribner's Sons, 1916).

⁴¹ On the story of Ishi, the anthropologist in San Francisco Alfred Kroeber who studied Ishi, and the nation's reaction to the "last wild Indian" in the early twentieth-century, see: Douglas Cazaux Sackman, *Wild Men: Ishi and Kroeber in the Wilderness of Modern America* (New York: Oxford University Press, 2010); for the history of the American Indian experience during centuries of American imperial expansion, see: Ned Blackhawk, *Violence over the Land: Indians and Empires in the Early American West* (Cambridge, MA: Harvard University Press, 2006); for a comparative study of the attempts to civilize American Indians while settling frontiers, with a view towards the early twentieth-century memory and ideology of Western conquest, see: Margaret D. Jacobs, *White Mother to a Dark Race: Settler Colonialism, Maternalism, and the Removal of Indigenous Children in the American West and Australia, 1880-1940* (Lincoln: University of Nebraska Press, 2009).

U.S. Congress debated the first successful federal aid highway act. In 1916, Representative Frank Scott expressed the nation's concerns over international standing, American democracy, and historical development. Scott made a forceful argument in favor of highway development premised on exceptionalism:

It shows that every foreign country, with the exception of Russia, has anywhere from one and one-half to three and one-quarter times the road mileage per square mile than has the United States, yet we claim to be a government of the people, for the people, and by the people, while those foreign countries are simply overshadowing us in their accomplishments in so far as good roads are concerned. Why, gentlemen, I desire to call your attention to the fact that 300 years before Christ Appius Claudius built a road from Rome to Naples which is better to-day than the road from here to Annapolis or the road from here to Richmond; still we claim to be the most progressive of all nations.⁴²

Representative Scott invoked an international and historical comparison to justify his argument in favor of good roads. Just as the highway advocates convinced the public to support roads as a sign of American exceptionalism, so, too, did elected officials use this rhetoric to win over their colleagues. This call also tied the unique political experiment of American democracy to the power of roads and the federal bureaucracy. Roads served two legitimizing aims: establishing historical relevance and democratizing the landscape.⁴³ The rhetoric of national exceptionalism through connection to the road building accomplishments of great ancient civilizations was so pervasive that, like the

⁴² Representative Scott speaking on HR 7617 on January 21, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1357.

⁴³ This work of the BPR—growing as a bureaucracy, federalizing a local/state issue, and democratizing the landscape—parallels how Donald Worster portrays the Reclamation Service concerning irrigation in the West. This parallel illuminates two processes in which federal power asserted goals of creating a more democratic and egalitarian landscape by centralizing power structures and decision-making processes. See: Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York Oxford University Press, 1992).

inflated claims of late nineteenth and early twentieth century western land promoters, it became the subject of parody.⁴⁴

As the connection between American road permanence and the legacy of Roman and historical permanence cemented, American road boosters contributed a new facet to the historical connection: American history. Prior to the BPR and AASHO standardizing the highway numbering system in 1926, for instance, organizations named roads to serve as a testament to their strength and influence, in addition to the economic touristic benefits. The Lone Star Trail, El Camino Real, Custer Battlefield Highway, Louisiana Purchase Highway, and Minute Man Route all imbedded American history into the roads. This naming practice connected historical American events to historical foreign empires through an infrastructural parallel. Just as road boosters named roads for American heritage, they did likewise for national and regional heroes, such as in the Daniel Boone Trail, William Penn Highway, George Washington National Highway, Jefferson Davis Highway, and Theodore Roosevelt International Highway.⁴⁵ Good roads, therefore, assured both individuals and nations of their place in the historical record.

Private organizations, government officials, boosters, and highway advocates all embedded meaning into the landscape in the first decades of the twentieth century through place names. This came in the context of a period, as Wrobel notes, when

⁴⁴ See, for example, an April's Fool Day joke involving Henry Ford: "FORD BUILD MEMORIAL HIGHWAY: Traverse Grand Canyon Snake River From Clarkston to Hintington Ore. Immortalize Auto Builder's Name," Accession 6, Box 15, folder "General Correspondence 1924—Co-Cy," Benson Ford Research Center, Dearborn, MI.

⁴⁵ On early highway naming practices and an extended discussion of the implications of the names, see: John A. Jakle, "Pioneer Roads: America's Early Twentieth-Century Named Highways," *Material Culture* 32, no. 2 (Summer 2000): 1-22.

“frontier anxieties” pervaded the popular consciousness. These anxieties, Wrobel notes, forced individuals to question American exceptionalism.⁴⁶ The practice of naming American highways after historical figures and events allowed America to project a future based on its historical progress. Road advocates promoted a rhetoric that embellished a nation-centered historic American narrative. “When Thomas Jefferson was President,” MacDonald reminded highway advocates, “the Congress provided for the building of the National Pike to carry the traffic westward.”⁴⁷ Not only did MacDonald suggest that the government had always been responsible for internal improvement, but he invoked the highways as the cause of Western migration and conquest of the frontier. MacDonald argued that the frontier may have closed, but the vehicle by which the frontier had been opened could still be further developed; namely, Americans could recapture the frontier spirit by building highways. History, both ancient and recent, became central to the road’s cultural meaning.

Complementing this intellectual tradition, engineers used roads that had lasted millennia as a technical foundation and model. These models demonstrated a tangible linkage between ancient days and modern America. This tangible technical linkage reinforced the racial linkage defined in contemporaneous pseudo-scientific works. In 1928, the *Chicago Daily Tribune* noted: “ANCIENT HIGHWAY PRACTICE GUIDES MODERN EFFORT.”⁴⁸ Despite this and other similar pronouncements, the engineers primarily used modern technical specifications; they invoked historical analogies for the

⁴⁶ Wrobel, *The End of American Exceptionalism*.

⁴⁷ The Need of Education for Highway Development, November 26, 1920, Box 6, Folder 11, Series 1: Personal, THM Collection, Cushing Library, TAM.

⁴⁸ Putney Haight, “ANCIENT HIGHWAY PRACTICE GUIDES MODERN EFFORT,” *Chicago Daily Tribune*, Oct 7, 1928.



Figure 3.2: In 1939, the BPR published this map of “Highways, Yesterday and Tomorrow” to promote the proposed superhighways. The map shows the legacy, through trails and illustrations, of America’s history and how it connects to the roads. The map, for instance, includes “Historic Roads and Trails” from 1790, such as the Boston Post Road, through 1830, such as the Natchez Trace, and to the 1850s, such as the Oregon Trail and Mormon Trail. Source: NARA-II: 119-M-1A-2221.

purpose of elevating the standing of engineers. Indeed, much BPR publicity carried modern images of Roman roads in Italy, and these parallels connoted the two peoples' connected engineering ability. However, modern road builders utilized the latest technological developments, thus differentiating themselves from Romans.⁴⁹ Instead, popular highway advocates compared the superiority of Roman roads to the potential—and destined—superiority of American roads. The *New York Times* went so far as to declare, "The main highways across Europe, many of them still in use today after 2,000 years, remain as monuments to the supreme mechanical genius of the Americans of their day, the old Romans."⁵⁰

Americans looked to the permanence of Roman roads as support for their road building investment. As America's attention turned towards European affairs in the late 1930s, America focused on two historical tropes. First, Americans studied how European road permanence stemmed from the foundation laid by Roman engineers and how that that should inform the way Americans built roads. Second, Americans doubled-down on the narrative of American history, showing how their nation had a long history that shows the progress of civilization, and that progress was now embodied by the automobile. Capturing the former attitude, Secretary of Agriculture (and future Vice President) Henry A. Wallace drove home the exceptionalist historical-future narrative in a radio broadcast justifying road building: "Every great civilization has had

⁴⁹ For details on the scientific and technological developments, I.B. Holley, Jr. presents the history of early road building by looking at how individuals implemented new technologies. He also traces engineering and machine developments. Holley, *The Highway Revolution*.

⁵⁰ Thomas S. Bosworth, "Rome Laid Roads Straight Ahead," *New York Times*, Jan. 5, 1930.

good roads. Roads are the channels through which the life blood of a nation moves.”⁵¹ Pivoting from the past to America’s future, Wallace continued: “The road network which we are setting up now will probably last for many hundreds of years in the United States and the job must be done wisely, looking toward the future.”⁵² Henry Wallace and road advocates looked towards a future in an American century, reinforced with great roads as modeled by legendary empires of the past. The rhetoric worked: individuals saw a connection between great empires and permanent roads. Italy today, policymakers and politicians noted, still bore the marks of Rome’s great accomplishments. These permanent markers could, therefore, serve as a testament to the greatness of American ingenuity and engineering. Wallace’s permanence argument reiterated the intellectual trope Theodore Roosevelt offered decades earlier: “Going through Italy after the Lombard, the Goth, the Byzantine, after all the people of the middle ages have ruled the country, it is the imperishable Roman road that appears.”⁵³ As the epigraph of this chapter demonstrates, Col. Wheeler, in the midst of the Second World War, noted the superiority of ancient roads, while simultaneously disparaging modern European roads. While national highway advocates noted national permanence through the persistence of its highways, individuals noted historical road comparisons because the rhetoric of exceptionalism had found a place in the popular cultural milieu.

⁵¹ Remarks by Henry A. Wallace broadcast in the National Farm and Home Hour, May 11, 1937, Box 10, Folder 2, Series 3: U.S. House of Representatives, 1926-1942, Carl Albert Congressional Research and Studies Center, the University of Oklahoma (hereafter: CAC, OU).

⁵² Ibid.

⁵³ Theodore Roosevelt, “National Development and Good Roads,” 227.

International Informational Ascendancy

In addition to placing America's highway program on a coequal platform with those of antiquity, highway advocates touted America's growing influence in international highway development processes. America, they claimed, epitomized a technocratic nation in which science and efficiency had triumphed, and this American model could be shared with other nations. In *Atlantic Crossings*, Daniel Rodgers finds connections and interdependencies in political and social processes in the Progressive Era, and this transnational dialogue also existed among highway engineers, politicians, and automobile enthusiasts.⁵⁴ Those engaged in this exchange shared information and best practices on building and organizing a national highway program. Americans came to tout the BPR as the paragon of research, construction, and administration, thus highlighting national exceptionalism in an international context. During the first decades of the twentieth century, Americans vied for international primacy; these efforts ultimately culminated in Americans hailing the bureau as "the best, most efficient highway administrative organization in the world."⁵⁵ To understand how Americans made the claim of international primacy, we must understand the way American engineers interacted with the international highway community, asserting their leadership and technocratic knowledge.

American highway advocates participated in and led international educational programs and international road congresses to show off American progress. The trajectory of international involvement shows a nation getting more involved in

⁵⁴ Rodgers, *Atlantic Crossings*.

⁵⁵ V.J. Brown, "An Open Letter to the President," *Roads and Streets*, Dec. 1937.

international affairs. Tracing how Americans asserted their knowledge globally also provides insight into how they promoted this involvement (or, in the early years, lack thereof) to their constituents at home. American road boosters and engineers learned how to tactfully promote the national program's strengths while carefully glossing over weaknesses. For example, an early road advocate made this point clear in a comparison to France's road efforts: "America is derelict in road maintenance but leads the world in the development of labor saving equipment and methods and so we feel that while their experience and knowledge will be valuable to us ours will be equally valuable to them."⁵⁶ By the 1920s, American road boosters took a different strategy: instead of explaining both strengths and weaknesses, they placed America in a global context where no country had a perfectly articulated and enacted road program while boosting the strengths of America. Indeed, when highway advocates recognized deficiencies, they used the international platform to deflect these shortcomings as a national mark.⁵⁷ Because similar problems existed across the globe in industrialized nations, engineers organized forums to correct problems and share ideas.

Examining America's involvement in the International Road Congress (IRC) throughout the early years of the twentieth century most effectively reveals the nation's global involvement in information sharing programs. The IRC, formally established in 1909 after its first meeting in 1908, met every few years to share information on road progress, mechanisms, machines, materials, and successes. This body also circulated

⁵⁶ Correspondence from Pennybacker to Page, n.d., "Am. Assn. For Hwy Improvement, 1911-1912" Folder, 30/530/21/23/4/Box 93, "Bureau of Public Roads Classified Central File 1912-1950" Series, RG 30, NARA-II (hereafter: BPR Series, RG 30, NARA-II).

⁵⁷ For an example of an engineer showing how America's engineering difficulties existed internationally: The Need of Education for Highway Development, November 26, 1920, Box 6, Folder 11, Series 1: Personal, THM Collection, Cushing Library, TAM.

informational and advisory tracts to its members. During the first decades of the twentieth century, the IRC became the premier association for those interested in highway construction.

In 1908, Logan W. Page traveled to Paris for the First IRC meeting. Page, however, served not as an official delegate to the congress, just as an observer. At this point, the U.S. Congress had not taken responsibility for road building: although some bills were proposed and debated, the federal government had not taken tangible action aside from establishing the Office of Road Inquiry as a purely informational organization. Therefore, the American government did not fund Page's trip, and he traveled without official stature. Because America's road building programs still operated largely at state and local scales without a centralized informational clearinghouse or authority, the national press reported on the opportunities for Page to learn from Europe. The *New York Times*, for example, emphasized "how far America is behind in the matter of roads, compared with Europe."⁵⁸ During the early years of roadbuilding, much of the press often acted as a key mouthpiece for the Good Roads Movement.

After the First IRC concluded, Page and his fellow American engineers lobbied the U.S. Congress once again. After expending discretionary funds on the trip, they sought a specific federal appropriation to enter the IRC as a permanent member. The lobbyists drew a direct comparison to other nations, noting the implications of not being a member. These advocates invoked other "undeveloped" countries, noting that "we [the United States] are about the only nation worthy of the name which has not already

⁵⁸ "WILL PLAN THE IDEAL ROAD," *New York Times*, Oct. 5, 1908.

joined. Even countries like Siam, Guatemala, Mexico and Cuba have joined.”⁵⁹ Congress, however, rejected this, and the United States remained outside the IRC. In a period defined by asserting progress and achieving progress through civic organizations, Congress deemed neither the IRC nor federalized roads as worthy of any appropriation for either travel or membership fees.

In the subsequent years, much changed with America’s international involvement. By the Fifth International Road Congress in Milan in 1926, America played a central role, contributing useful innovations and advice. This international change occurred because of the internal American development during the intervening period. Between 1910 and 1916, the American highway bureaucracy solidified its place as a technocratic system that trained and employed the nation’s best engineers. With public support and federal appropriations, the BPR embraced its role as an innovator and leader. In the 1920s, American highway boosters invited foreign engineers, students, and politicians to America to tour roads. In 1924, for example, America invited delegates from 19 different Latin American nations on a 31-day tour of roads, road testing stations, construction sites, colleges and universities, and automobile manufacturing plants.⁶⁰ Before the 1926 Milan Congress started, the *New York Times* informed the nation that America had “a road magnet ...drawing students of all phases of the highway subject form all parts of the world.”⁶¹

⁵⁹ Correspondence from Director of OPR to Congress, n.d., “Old Public Roads Corres. – International Road Congresses 1908-12” Folder, 30/530/21/23/1/Box 74, BPR Series, RG 30, NARA-II.

⁶⁰ For context and more information on the 1924 Pan-American delegation’s trip through the United States, see Chapter Four.

⁶¹ “MOTOR INFLUENCE FOR GOOD ROADS,” *New York Times*, Oct. 17, 1926.

By the Fifth IRC in 1926, then, American highway boosters saw their nation as a frontrunner in road development and education, and because of this, the delegation received federal support. The *Washington Post* reported on how the U.S. Congress appropriated \$3,000 annually in perpetuity for membership in the Permanent Association of International Road Congress by declaring that America would join with “all other leading countries of the world.”⁶² At the meeting, American engineers presented papers and organized discussions, and MacDonald reported back home to Americans how well the world had received his delegation’s knowledge.⁶³ Even Benito Mussolini, proud of his nation’s legacy of Roman roads, complimented MacDonald on the American road program.⁶⁴ With leadership came responsibility and opportunity, and the U.S. Congress authorized the 1926 IRC United States delegation to extend an invitation to the body to hold its next international meeting in the United States.

In 1930, for the first time ever, the IRC convened outside of Europe: in Washington, D.C. The publicists who wrote about the IRC in Washington, D.C. emphasized American superiority in technical expertise, premised on a developed and uniform education system. MacDonald had long stressed the importance of developing a highway engineering education system in America to fulfill the growing need for technical knowledge in the field and to develop best practices. While this education program helped to standardize American highway programs, it also afforded Americans another opportunity to assert exceptionalism. In the year prior to the Congress,

⁶² “International Road Congress,” *Washington Post*, Apr. 14, 1926.

⁶³ Road Congress Reviews World Highway Practices at International Meeting in Milan, October 28, 1926, Box 6, Folder 75, Series 1: Personal, THM Collection, Cushing Library, TAM.

⁶⁴ *Ibid.*

“governmental officials, engineers, businessmen and students from China, Japan, Australia, India, Mexico, Norway, Sweden, Chile, Argentine, Brazil, Colombia, Ecuador, Venezuela, Bolivia and Peru [had] spent a few days to an extended period gathering data for the direct purpose of transplanting to their own countries such of our highway experiences.”⁶⁵

In his opening remarks at the plenary session of the Sixth IRC, MacDonald compared America to the conference’s last host country, Italy: unlike Italy, America did not have “2000 years and more of transportation history,” but the United States still had made incredible progress.⁶⁶ MacDonald used a message he repeated often: although Europe has had Roman roads and the Roman model off of which to build, America has surpassed Europe in just a few decades. American highway engineers and industry executives used this event as a platform to show off America’s progress to more than 650 delegates. While in 1908 the *New York Times* had emphasized America’s backwardness, by the 1930 Congress the tables had turned. “The delegates of sixty nations [came] to the United States,” the *Times* explained, “which now has more good roads than any other country.”⁶⁷

⁶⁵ Paper delivered before the Thirteenth Annual Meeting of the American Association of State Highway Officials entitled “HIGHWAY POLICIES,” Oct. 3, 1937, Box 6, Folder 87, Series 1: Personal, THM Collection, Cushing Library, TAM.

⁶⁶ MacDonald, of course, is ignoring the transportation methods and networks Native Americans; interestingly, many BPR roads followed traditional Native American roads and networks. For a discussion of the extensive networks in Native American society connected through the Mandan, see: Elizabeth A. Fenn, *Encounters at the Heart of the World: A History of the Mandan People* (New York: Hill and Wang, 2014). Talk at the Plenary Session of the Sixth International Road Congress in Washington, D.C., Oct. 6, 1930, Box 6, Folder 113, Series 1: Personal, THM Collection, Cushing Library, TAM.

⁶⁷ “International Road Congress,” *New York Times*, Oct. 9, 1930.

While American highway advocates used the Sixth International Congress as a capstone event to highlight America's progress, American engineers and educators engaged in information sharing and engineer training regularly. By the 1930s and 1940s, American officials defined and promoted informational tourism. In the 1930s, America became the leading training ground for road developers. American engineers contributed their knowledge to "world progress" through highway building in four main ways. First, Americans supplied and circulated literature on all phases of highway development, from the actual construction to bureaucratic organization and administration. Next, Americans contributed to world knowledge by mere "participation in international conferences." Third, American colleges and engineers received individuals and groups from around the world to demonstrate and teach best highway development practices. Lastly, America supplied technical direction and supervision to highway projects across the globe. This was done both through correspondence and by sending engineers abroad to direct highway building. Chapter Four discusses the ways in which American technocratic knowledge and road building practices contributed to a form of highway diplomacy in the developing world, while this section focuses on how Americans used education as a competitive benchmark in developed (i.e. European) nations. These practices all contributed to the idea that "the United States ha[d] been outstanding among nations in the construction of highways."⁶⁸

⁶⁸ In 1948, the State Department endorsed and legitimized the practice of highway diplomacy through education. In partnership with the Bureau of Public Roads, the State Department invited delegates to the United States from nearly 20 countries to participate in a 17-week course on highway development. For details, see: Report of the Bureau of Public Roads entitled "ACTIVITIES IN FURTHERANCE OF INTERNATIONAL AFFAIRS," Oct. 1950, Box 7, Folder 71, Series 1: Personal, THM Collection, Cushing Library, TAM.

Americans used this international platform not only to develop their own program, but to tout American technological and infrastructural development. The international arena served as a stage on which to demonstrate American exceptionalism through influence and skill to both expert and public audiences. The Bureau of Public Roads, in conjunction with the Office of Motion Pictures, created and circulated films “in all parts of the world.” The global “demand” for these films on American roads and road-building techniques was “so great that the titles [were] translated into a number of foreign languages and many copies [were] purchased by agencies of other Governments and by Americans interested in promoting the construction of improved roads in other lands.”⁶⁹ These films constituted two purposes: first, they were technical films that highlighted the proper means to develop a highway program; second, they were propaganda films that highlighted the multi-faceted benefits of the Good Roads Movement in America, including economic, social, and political successes. These films served as the culmination of America’s efforts to assert its technocratic supremacy in global information exchanges that had involved conferences, tours, informational circulars and guides, and films.

Discourse of Global Competition and Comparison

The international knowledge sharing opportunities allowed Americans engineers to assert their technical primacy on a global stage, report home to Americas about their superior engineering skills, and showcase American highways to foreign

⁶⁹ Report on U.S. Bureau of Public Roads and Its Work, May 1, 1932, Box 8, Folder 40, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

embassies. In addition to using the International Road Congress and similar engineering forums to define exceptionalism, American road advocates and engineers oftentimes made direct comparisons with European roads. Whether achieved or pending, the potential exceptionalism stood as a central tenet of this highway discourse. Despite the exceptionalist rhetoric used in this transnational dialogue, American engineers recognized some European nations succeeded in components of their respective highway programs. These American engineers advocated for perfecting and using in the U.S. some aspects of European models to maintain national primacy. American highway advocates found a balance in their rhetoric in promoting American exceptionalism while recognizing deficiencies in the program. The rhetoric in these narratives balanced on a fine line, encouraging America to adopt some aspects of European highway building while maintaining a belief in overall American superiority. So long as politicians and the public put their faith in engineers and the BPR, the argument went, the highway bureaucracy attained American exceptionalism through its continuously developing and improving road system. Engineers, journalists, and motorists all contributed to this discourse of international competition.

Highway advocates invoked an economic argument. American exceptionalists asserted that the nation's natural resources provided an unrivaled opportunity for economic primacy. The roads however, were central to exploiting this natural opportunity. Especially with the rise of the trucking industry, Americans deemed roads increasingly important. Indeed, to fully realize America's industrial might, roads had to match the country's other developments and the transportation systems of the world. The Illinois Bankers' Association, for example, published a good roads pamphlet that

declared: “The roads are an index of the character of any country, determining it’s [sic] importance and limiting or aiding its advance.”⁷⁰ Truckers and industrialists further echoed the idea that American roads needed development, especially when compared to European roads. Truckers and lobbyists often repeated the sentiment to their national representatives and the BPR officials that “The necessity of good roads ... is handicapping all kinds of factories.”⁷¹

This early pro-road comparative economic rhetoric found its way into the 1916 debate over federal aid roads. Representative Edward B. Almon made this point clear in a comparison to developed European nations: “Of all civilized countries, it is said that this country has the poorest roads. In almost everything else it stands first; in natural wealth, agricultural products, in the manufacture of steel and iron, and in the number of miles of railroads we stand first.”⁷² Almon’s colleague, Representative James Benjamin Aswell made a connection with Germany’s economy: he believed that Germany’s industrial power stemmed from its road development. Speaking on behalf of the federal aid bill, Aswell made explicit the connection between Germany’s roads, industrial development, and international prominence, declaring: “Germany began her marvelous plan of preparedness by building permanent roads and factories.”⁷³ Even as World War I raged in Europe, American politicians turned to belligerent nations as exemplars in

⁷⁰ Illinois Bankers’ Association “Good Roads” 1912 Pamphlet, “1913-1915 Good Roads Trains Etc.” Folder, 30/530/2123/6/Box 111, BPR Series, RG 30, NARA-II.

⁷¹ Correspondence to OPR, Dec. 6, 1917, “Federal Aid System—1918-1917” Folder, 30/530/22/23/6/Box 1956, BPR Series, RG 30, NARA-II.

⁷² Representative Almon speaking on HR 7617 on January 22, 1916, 64th Cong., 1st sess., *Congressional Record* 53, pt. 2:1374.

⁷³ *Ibid.*, 2:1280.

road development. These political statements offered a prescription for America to achieve economic supremacy: a developed transportation network.

In addition to the business interests, motorists and newspapers employed comparative exceptionalist rhetoric aimed at tourism promotion. While the 1910s and World War I years focused on America's productive power, the subsequent decade focused on tourism. Although uneven, prosperity became a central marker of the 1920s, and those with the financial means sought to see America. In 1927, H.H. Rice wrote an article for the *New York Times* about renewed construction efforts in Europe, which had picked up after World War I, and he noted that "road work is proceeding slowly but surely." Rice concluded his article by invoking the notion of American highways as a model for new European development: "It is the mature judgment of close students that it is not amiss of the mark to say that what has happened in the United States during the past decade is destined to repeat itself in the next decade of development of transportation throughout Western, Central and Southern Europe."⁷⁴ Reinforcing the idea of American exceptionalism, Rice asserted that the American model inspired the European work.

The competition for good roads to facilitate tourism existed in the context of the "See America First" movement, which privileged and promoted American scenery. Aimed at boosting domestic tourism, especially in the South and West, this movement relied on effective transportation networks, including the highway system. Beyond major newspapers, such as the *New York Times*, many automobile-specific publications

⁷⁴ H.H. Rice, "AMERICAN VISITOR DESCRIBES MOTOR AWAKENING IN EUROPE," *New York Times*, Jan. 9, 1927.

took note of what was going on in other nations, comparing foreign progress to American development. These comparisons fed into this transnational dialogic competition and the domestic nationalist promotion. *American Motorist*, *Good Roads*, *Public Roads*, *Outing*, and *Southern Good Roads* all regularly published stories about automobile trips around the globe or highway development in America. These articles compared highway experiences across the oceans, ultimately showcasing the laggard development of European, Asian, and African roads. Automobile enthusiasts, for example, lauded American highway engineers for the “modern American type of mountain road building” that was steeper and led to more beautiful vistas than roads in Europe.⁷⁵ As American tourists flocked to wilderness areas, however, many grew concerned, and one historian traces American conservation to the havoc and expanded tourism wrought by the automobile.⁷⁶

Beyond drawing direct comparisons to the destinations and opportunities stemming from good roads, the press noted how American road development actually preceded European development. The *Los Angeles Times* wrote that European highways in 1936 were “just as the American continent was fifteen years ago!”⁷⁷ A London correspondent went further, implying causality: “American transcontinental highways are furnishing the inspiration for the first trans-European motor road.”⁷⁸ This rhetoric constituted an important point in American history: America was not following Europe’s model, but rather Europe seemed to be following America.

⁷⁵ Frank George, “TOP-OF-THE-WORLD HIGHWAYS,” *New York Times*, Jun. 20, 1937.

⁷⁶ Paul S. Sutter, *Driven Wild: How the Fight Against Automobiles Launched the Modern Wilderness Movement* (Seattle: University of Washington Press, 2002).

⁷⁷ “Network of Good Highways Opens Europe to Motorists,” *Los Angeles Times*, Apr. 26, 1936.

⁷⁸ Clair Price, “ROAD ACROSS EUROPE,” *New York Times*, Dec. 22, 1935.

As the press and public saw the comparisons—and implied American leadership—in global highway progress, American highway engineers clearly articulated their ideas on where America stood in a global system. In the context of a race for global leadership and primacy, a model highway system as a symbol of successful public works radiated national and political success. “All political systems,” Wolfgang Schivelbusch contends, “have showcase projects through which they present themselves to the world and expect their aims, methods, and ideals to be judged.”⁷⁹ America presented its highways system to the world, and they affirmed the project’s success through domestic comparative discourse. During the 1920s and 1930s in the world’s global powers, inspired by the Soviet Union’s Five Year Plan, we find “a common striving for technological monumentalism that would modernize and re-form entire landscapes.”⁸⁰ Throughout the 1930s, American highway advocates developed and discussed a hierarchical system to rank countries and their highway programs. In this system, only three countries deserved American attention: France, England, and Germany. Though by the 1920s America competed with only these three countries, it began collecting detailed information, such as population, mileage, administration of road programs, cost of road per mile, cost of maintenance per mile, and means of funding public construction, on countries all over the world, including, for example, Hungary, Italy, Japan, Austria, and Norway.⁸¹ In the 1920s and 1930s, American highway engineers offered two primary excuses for why parts of their programs did not

⁷⁹ Schivelbusch, *Three New Deals*, 138.

⁸⁰ *Ibid.*, 153.

⁸¹ For the complete breakdown of the comparison of international road programs in 1913, see: “Comparative Statistics on Road Systems of Foreign Countries,” 1913, “Tables – Data RE Highway Systems of Nations of the World 1913” Folder, 30/530/21/23/5/Box 98, BPR Series, RG 30, NARA-II.

measure up to those of France, England, or Germany. First, highway engineers in America mentioned the tremendous number of automobiles on the roads. American automobile traffic seriously exceeded that of any European nation. Second, highway engineers in America noted that no historical model existed for the US to follow. While England and France built on Roman roads, Americans could do no such thing.⁸²

Despite the “many radically different conditions between the United States and these other countries,” MacDonald and his associates in highway associations and organizations sought to learn lessons from their European counterparts. Doing so, highway engineers always balanced the tension between American backwardness and exceptionalism: while offering the aforementioned excuses for European development, the engineers assured listeners that America could pick and choose components of European models that, when brought together with superior American engineering, could form the perfect highway model.⁸³

France, engineers noted, stood as the single greatest competitor to the United States in road development. However, because “France had as the original basis of its highway system ... the old Roman military roads,” Americans did not need to fear the superiority of their French counterparts. American engineers attributed France’s success to the Romans and the government under Napoleon, which catalyzed a program of national investments in roads. American engineers focused on how the French government had taken fiscal responsibility for highway development, and they regularly

⁸² Many states, however, submitted road routes based on old Indian trails.

⁸³ Speech entitled “Contrasting United States and European Practices in Road Development” given by Thomas H. MacDonald at the Twenty-fourth Annual Meeting of the American Association of State Highway Officials, Dec. 5, 1938, Box 6, Folder 199, Series 1: Personal, THM Collection, Cushing Library, TAM.

used this point in lobbying the U.S. government. The German model also taught the lessons of government oversight and centralized authority. In 1934, the Third Reich hired Dr. Fritz Todt for “the undertaking of a spectacular national system of special motor roads,” and this project succeeded because “it was predicated upon centralized control.”⁸⁴ Despite political tension with Germany in the late 1930s, highway engineers recognized the importance of consolidated power, another lesson that American road building advocates took to heart.⁸⁵

American engineers gleaned another insight from the German model, a highway system that connected major metropolitan areas specifically dedicated to fast motor travel. In America, the national interstate routes paralleled this concept. The British model, though, reinforced the lesson of designing roads for specific functions. The British road system had been developed over many years in cities with high population density for varied uses, including horses, pedestrians, and automobiles. While the German Autobahn connected cities, the English model successfully segregated traffic within cities. This system reflected one built for horses, which connected all parts of the city effectively and maintained natural barriers to excessive speed and risks (i.e., no straight, wide roads).

In the narratives constructed around these three European models, no country had refined a highway system to meet all the needs of a twentieth century motoring public that sought both economic growth and leisure through the roads. Engineers argued that America, using parts of each model, could build the perfect system. As

⁸⁴ Ibid.

⁸⁵ For more, see Chapter One, which discusses the centralization of power in the United States’ road building program.

MacDonald articulated these comparative models throughout the 1930s, he learned what America should replicate and what should serve as a warning. In 1938, MacDonald led a seminar at the Graduate School of Public Administration at Harvard University, informing the future public administrators about being selective regarding international road lessons. Specifically, MacDonald returned to France, Britain, and Germany as models from which he could pick and choose key insights. These models and lessons, MacDonald argued, gave American highways the edge over other nations because Americans had a clean slate to combine all the developed nations' best practices.

America could achieve its ultimate goal of building highways that would compare to those of the Roman Empire and Napoleonic France by incorporating those lessons into superior American educational programs. Although MacDonald and highway engineers praised parts of other countries, they never lost sight of the fact that they were trying to build an exceptional American system. The process of highway development did not happen in a vacuum; rather, the process was engulfed in a transnational dialogue, which fueled a nationalist spirit of competition. As the American highway system developed in the 1920s and 1930s, American highway engineers asserted themselves more prominently in this transnational dialogue. With the confidence of a developed system, Americans could both learn without jeopardizing their self-proclaimed exceptionalism and teach using tangible technical and administrative examples. Americans used this dialogue as an opportunity to reinforce notions of American exceptionalism by showcasing tourist opportunities in America and the example American tourist roads provided to Europe, the superiority of American technological expertise in international road building forums, and the ways in which

America could still improve. Recognizing the deficiencies in the American system was an important component to American exceptionalist rhetoric: through learning from other countries' successes, America could surpass them

Military Strength Through Good Roads

A nation can measure its power by its military effectiveness and preparedness. Highway advocates understood this test of strength, and they sold the highways as a means to protect the country and build the military. Indeed, the Bureau of Public Roads and War Department had a longstanding cooperative and mutually beneficial relationship. More importantly, road advocates promoted their work as a means to accrue international power via military strength. The connection between military strength and good roads also touches on the aforementioned connection to historical power: Roman and French roads were often acknowledged as being built for purposes of conquest or military security. In that vein, the American highway advocates followed, and they used military roads to assert exceptionalism.

Even before America's entry into World War I, highway advocates emphasized protection and preparedness. During the 1910s, numerous highway bills floated through Congress, and many carried the language of national defense. This rhetoric picked up between WWI and WWII, but it was certainly prevalent prior to 1917. Because "a great war now being waged in Europe demonstrates a national system of good roads is essential to the successful protection of a country," Alabama's legislature urged the U.S. Congress "to bring about at the earliest possible moment the construction of a national system of good roads." Similarly, the Maine Automobile Association sought federal

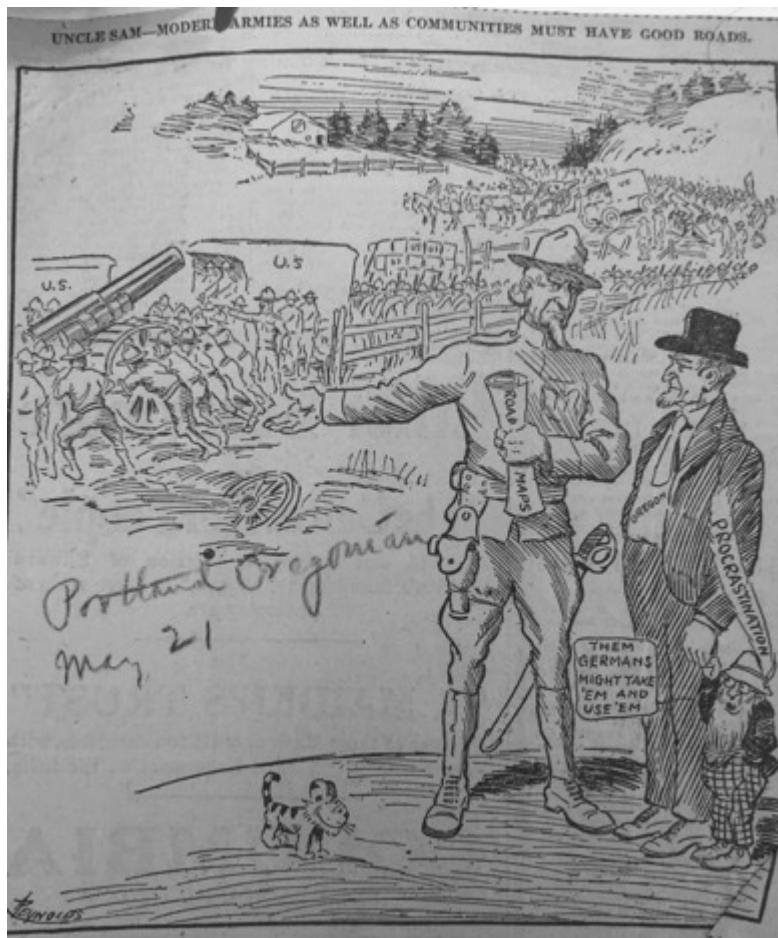


Figure 3.3: This cartoon, printed in the *Portland Oregonian* during WWI, shows the necessity of good roads for national strength. The military needed good roads. Source: NARA-II 530/22/45/7/2845.

funding to connect its state with “a system of roads ... to serve particularly in case of military necessity.”⁸⁶ Indeed, in California one author posited “a plan to encircle the country with military highways” as “a means of protecting our boundary.” In response to the California idea, the state’s Representative Stephens introduced a bill in 1915 to allocate up to \$100 million for a national highway defense system.⁸⁷

⁸⁶ Both the Alabama and Maine proposals, among others, appear in “GOOD ROADS PART OF PREPAREDNESS,” *New York Times*, Oct. 24, 1915.

⁸⁷ B.E.M., “PROTECTION BY ROADS,” *New York Times*, Nov. 28, 1915

Explicitly linking military strength and national power with good roads became an increasingly common feature of the good roads rhetoric. Because of this linkage, the Bureau of Public Roads agents worked closely with their counterparts in the Department of War. Following World War I, highway engineers and military experts noted the terrible condition of the nation's roads; movement of heavy trucks had devastated both improved and unimproved roads. Moreover, the events of WWI demonstrated the bad transportation links among points of military importance. Highway experts justified roads as connecting a civilian and peacetime luxury to a wartime necessity. If highways were not developed when the nation had the opportunity during times of peace, the lack of improved transportation opportunities "will retard and partially defeat the effectiveness of defense preparations in their most fundamental and immediately important aspect."⁸⁸

The Great War "recast interstate highways as military necessities" and energized the Good Roads Movement.⁸⁹ Throughout WWI, organizations, individuals, and politicians saw the importance of a national highway system for military defense. The federal government began to see a system of roads as a requisite component of a civilized and defensible nation. In 1917, Congress established the Highway Transport Committee (under the Council of National Defense) to coordinate the war mobilization effort through the vantage points of roads. Individuals and organizations lobbied the federal government to develop a national system of roads for national defense purposes. Politicians responded. Although Congress passed no federal highway funding bill,

⁸⁸ Notes for preparation of an article for *Engineering News Record* on Roads for National Defense, n.d., Box 7, Folder 7, Series 1: Personal, THM Collection, Cushing Library, TAM.

⁸⁹ Ingram, *The Dixie Highway*, 92.

members debated myriad bills. One such bill was the Chamberlain-Dent Bill, backed by the American Automobile Association, which “proposed granting the War Department the authority to plan a system of improved highways throughout the nation to facilitate the movement of troops and supplies in times of war.”⁹⁰ The army even recruited road builders. World War I catalyzed the modern national Good Roads Movement by juxtaposing the necessity of a developed system of roads with America’s laggard road development. Indeed, during the war, highway advocates repeated the notion that “Every move made to lessen the amount of Highway work in this country, is a move against our ability to win the war.”⁹¹ Military power and good roads were inextricably intertwined. Therefore, after the war, “A plan of coordination [was] worked out with the War Department providing for an extensive study to determine the roads which should be developed to serve the military establishment.”⁹² In 1922, the U.S. Army finished the “Pershing Map,” which designated a national highway system of roads of primary and secondary importance in the case of war. This 78,000-mile system offered the BPR an opportunity to incorporate national security needs into their highway system planning. Indeed, the BPR’s road system reflected many of these roads that connected supply and industrial regions with ports, bases, and training areas.

In the years just after World War I, the linkage between national military power and good roads became more pronounced. As the interwar period progressed, however, the explicit rhetoric of roads for military purposes subsided, becoming more implicit in

⁹⁰ Ibid., 116.

⁹¹ Correspondence to OPR, Dec. 18, 1917, “Federal Aid System—1918-1917” Folder, 30/530/22/23/6/Box 1956, BPR Series, RG 30, NARA-II.

⁹² Paper on coordination between the BPR and War Department, n.d., Box 6, Folder 20, Series 1: Personal, THM Collection, Cushing Library, TAM.

rhetoric. However, military officials worked closely with BPR officials to see the Pershing Map realized. Just following WWI, *The Military Engineer* published a seminal article on “The Future of American Roads.”⁹³ This article offered a blueprint to achieve their bold prophecy: “In a remarkably short time, [America will finish the] building of a highway system which will rank with the best of the world.” According to the author, this comparative success would come from a sustained and continued road building effort. *The Military Engineer* warned that roads cannot fall into disrepair during peacetime because of their integral contribution during wartime. A few years later, the military defense connection reappeared in a Congressional debate over another road bill. In 1928, nearly a decade removed from World War I and a decade before tensions in Europe rose again, national defense served as a key theme in justification for road building. Advocating for a bill for “Transcontinental Hard-Surfaced Highways,” Representative William Holaday of Illinois made the point clear: “As a national defense measure alone, then, the building of such a system of national roads would be fully justified.”⁹⁴ Although the 1920s saw some references to military defense, during the interwar years generally the explicit connection between roads and military necessity was not often invoked. However, highway officials and military officials continued to discuss the road system regarding martial necessity. For example: Thomas MacDonald, through the 1930s, publicly praised German engineers for imagining and building the Autobahn; privately, however, military engineers saw the Third Reich’s expansionist rhetoric paired with its Autobahn and fretted. In a statement contrasting America’s

⁹³ “The Future of American Roads,” *The Military Engineer*, 1924.

⁹⁴ Remarks of Will Holaday Regarding the Holaday Bill for Transcontinental Highway, May 30, 1928, Box 6, Folder 26, Series 3: U.S. House of Representatives, 1926-1942, CAC, OU.

proclaimed economic road motivations with Europe's, one BPR official declared: other nations build "great road systems under military dictate, largely for purposes of conquest. The United States plans a system of highways to serve her people in the pursuit of economic freedom and happiness."⁹⁵ Indeed, through the late 1930s, even as war raged in Europe and America was becoming increasingly implicated, President Roosevelt and highway advocates maintained a firm public belief that roads contributed primarily to peacetime infrastructure needs and promoting nationalistic peace and stability.⁹⁶

With the approach of another world war, rhetoric returned to explicit military terms. By the 1940s, most highway advocates regularly invoked the argument of military necessity when discussing highways. In 1941, for instance, Thomas MacDonald mentioned highways as a means of national strength in every one of his public speeches, radio addresses, and published articles.⁹⁷ During the war, President Franklin D. Roosevelt established the National Interregional Highway Committee. This committee looked into the needs of an interstate highway system for the war. In 1944, the committee published an updated version of the 1922 Pershing Map, with a new focus

⁹⁵ Federal and State Policies in the Construction of the Federal Aid Highway System, n.d., Box 7 Folder 93, Series 1: Personal, THM Collection, Cushing Library, TAM.

⁹⁶ For example, see Wrobel's treatment of FDR's 1937 dedication of the Bonneville Dam in Wrobel, *America's West: A History, 1890-1950* (Cambridge: Cambridge University Press, 2017), 162.

⁹⁷ Although there may be public material in which MacDonald did not mention highways, the author has not found them. Moreover, the compilation of his public addresses reveals for the year only has speeches that have something to do with the defense. For example, he published *Highways for National Defense* in "The Constructor" in July, delivered a radio address entitled "The National Defense Truck and Bus Inventory" on WJSV, Washington, D.C. and the Columbia Broadcasting System in September, and presented "The Indispensable Quality of Highways to the National Defense" at the annual American Association of State Highway Officials meeting.

on transcontinental routes.⁹⁸ Highway advocates sold this strategic network as a way to strengthen America's defense, but they often reminded public audiences of the benefit of road investment for peacetime. Roads served as a tangible quantifiable attribute by which to measure a nation's power. America sought international primacy by that measure. Highway advocates knew the argument for military strength through road building would hold because it allowed Americans to reaffirm their national exceptionalism.

Conclusion

Whether or not America's highway system was truly exceptional is not at issue here. What is clear here, however, is that highway advocates promoted the system as a means to assert and reify national exceptionalism. Inherent in the building of the highways, then, was a cultural connection to power and supremacy. These cultural ideas are embedded in the highways that link the nation. From the beginning, highways held special significance to Americans because they were promoted as a way to gain international standing. Asserting national standing on an international stage assuaged many anxieties during the first half of the twentieth century.

The narratives that embedded meaning into the highway are important to understanding why the highway system was built. In 1920, Thomas MacDonald warned the American Road Builders Association that they should be careful how they build the highways, but more importantly, he said, highway builders must be careful about how

⁹⁸ The greatest difference between the Pershing Map and the 1944 NIHC map was the lack of regionalism. In 1922, the South was almost entirely bypassed, with the authors favoring the industrial North as the center of most military road activity. In 1944, though, the map focused on connecting major military points in the West, South, and North.

they framed the highways culturally. MacDonald emphasized that the program's success relied on tax money, and that funding depended on whether or not highway builders "retain the confidence of the people." Because the "crucible of public opinion" would determine the future of the highway program, highway advocates framed the debate in a way that would assuage popular anxieties.⁹⁹ By using the highways to highlight national supremacy, highway advocates could win over public opinion and the necessary funds.

Highway advocates invoked Lord Francis Bacon's philosophy to show how highways made their nation great. Lord Bacon emphasized that "easy conveyance of men and commodities from place to place" helped make a nation great. Highway advocates employed Bacon's philosophy to justify their highway program spending and shape public opinion. "The highest level of national prosperity is reached," highway advocates argued, "when the means of transport and exchange are so highly developed."¹⁰⁰ The true measure of highway accomplishment would be the ultimate success and prosperity of the nation. Highway advocates trafficked in the cultural zeitgeist of exceptionalism to gain support and justify their program. They harkened on three themes that sought to secure or justify America's exceptionalism through highways: the presence of good roads of the famous historic empires, the international competition and dialogue with European builders, and the demonstration of military power. William Preston Slosson, one of the first academics to write about the cultural

⁹⁹ Address before Road Builders Association in Louisville, Feb. 13, 1920, Box 6, Folder 2, Series 1: Personal, THM Collection, Cushing Library, TAM.

¹⁰⁰ Paper entitled "The Measure of Highway Accomplishment" written by Thomas H. MacDonald, n.d., Box 6, Folder 17, Series 1: Personal, THM Collection, Cushing Library, TAM.

zeitgeist surrounding World War I noted “a remarkable intensification of nationalism.”¹⁰¹ Highway advocates co-opted this exceptionalist nationalist rhetoric to infuse meaning into their work. By asserting American exceptionalism as measured by the strength and development of the highway system, highway advocates assuaged popular anxieties concerning a new world order in a postfrontier America.

¹⁰¹ William Preston Slosson, *The Great Crusade and After, 1914-1928* (New York: The Macmillan Company, 1931).

Chapter IV: Hemispheric Power through Foreign Infrastructure Intervention

“As related to the economic interests of the United States ... this highway has been thought of as an automotive sales outlet, as a tourist attraction, and as a trade-in-general stimulator ... As a missionary, a highway has no equal.”

*Report By the Bureau of Public Roads of a Reconnaissance Survey, 1933.*¹



Figure 4.1: Standard Oil produced commissioned this undated "Pictorial Map of the American Continent featuring the Pan American Highway and showing some of the natural resources, scenic wonders, and points of interests," and the General Drafting Co., Inc. drew the map. The map highlights (in red) the route of the Pan-American Highway, while emphasizing both industrial opportunities and historical points of interest along the route. General Drafting Company and Standard Oil, *Pictorial Map of the Americas*, New York, David Rumsey Historical Map Collection No. 6780.003.

¹ *Report By the Bureau of Public Roads of a Reconnaissance Survey for the Proposed Inter-American Highway from the Republic of Panama to the United States, 1933*, 1:24, "Reports on Highway Studies" Folder, 30/530/24/23/1/Box 1, "Bureau of Public Roads Classified Central File 1912-1950" Series, Record Group 30, NARA-II (hereafter: BPR Series, RG 30, NARA-II).

By undertaking a major infrastructural road project in Latin America, Americans asserted their global presence and leadership in a physical manner. Complementing actual highway construction, the rhetorical and economic justification for this new manifestation of diplomatic efforts illuminates a shift in American foreign policy, highlighting an American foray into global leadership. Its boosters claimed that the Pan-American Highway project through Latin America did more than safeguard America's security; it also bolstered the American economy. From the outset, both government agents and private actors cooperated to define and assert Pan-Americanism, a new policy to guide hemispheric relations. Beginning in the 1920s, American policymakers, highway engineers, and businessmen used foreign infrastructure intervention to promote both domestic and foreign goals. These actors cooperated to lay down a continuous improved road, the Pan-American Highway (PAH) stretching through 19 nations from Brazil to the United States. They organized international conferences, oversaw reconnaissance missions in Latin America, sent engineers south, and improved highway mileage along the route. By the 1920s, America had achieved sufficient international power and highway development experience to lead this hemispheric project, and this project's economic development model established the framework for subsequent foreign policy intervention projects throughout the "American century." While promoting the project by claiming it would modernize Latin America, the underlying American justification for the highway rests on United States' profit motive and global leadership goals.

American road building experience and knowledge allowed American diplomacy to accrue international power and influence in the form of project leadership.

By replicating American highways in Latin America, American businessmen and engineers could showcase the pride of their domestic infrastructural achievements. Electing to build highways abroad, Americans chose to undertake a project that was utilitarian, physical, and infrastructural. This highway project was utilitarian in that the roads would be used regularly by the masses, who would recognize the hemispheric connection and American leadership embedded in the landscape. This utilitarian project created a physical manifestation of American technocratic excellence that would leave a lasting mark throughout Latin America. This physical mark further served American economic developmentalist and foreign nation building goals by modernizing Latin America's infrastructure. The PAH provided American developers a foothold in Latin American nations.

The project, however, often did not actually progress as expected by the various Pan-American Highway and Inter-American Highway Commissions. Throughout the late 1920s and early 1930s, little material progress was completed on any internationally unified construction campaign. Indeed, through most of its history, the PAH came together by virtue of nations building their own roads where needed, which often overlapped the PAH map. However, the construction of the highway itself is not the focus here, but rather the American discourse and leadership at the heart of promoting and undertaking that construction: why and how did America support this foreign infrastructural intervention? While the highway may have been more imagined than real through the 1920s and 1930s, the discourse and maps reveal a more complete historical picture of the role of highways in the early twentieth century American consciousness.²

² On the role of maps in the American consciousness, see: James R. Akerman, "Twentieth-Century American road Maps and the Making of a National Motorized Space," in *Cartographies of Travel and*

The maps and publicity made this project real, and the goals of this project fed into contemporaneous anxieties that shaped foreign and domestic affairs. This project, regardless of its tangible progress, established a private-public partnership model that cooperated towards achieving newly articulated American strategic goals. While domestic road programs established an institutional bureaucracy and fed into notions of exceptionalism, American diplomats and businessmen extended the road program abroad, cementing hemispheric leadership and technocratic recognition.

The PAH government-business cooperation epitomizes the United States' development of historian Ellis Hawley's model of an "associationalist state" in which private and public actors cooperated as a managerial elite to guide efficient progress. The managerial elite's outsized role and the trust the public placed in the technocratic leadership, then, connects the long Progressive Era to the New Deal through highway leadership. This chapter builds on a wealth of excellent corporate histories, drawing connections between the corporations and American politicians' agendas. The PAH tied business and government together to promote a national agenda. Americanism—an economic and ideological ideal promoting capitalism and individual liberty—spread throughout the hemisphere through America's highway diplomacy. Beyond the idealism inherent in the highway project, the profit imperative drove this private-public partnership. These private and public agents worked together to ensure Americans could

Navigation, ed. James R. Akerman (Chicago and London: The University of Chicago Press, 2006), 153. The idea of a highway being "more imagined than real," yet serving an organization's stated goals comes from Euan Hague's study of the United Daughters of the Confederacy's construction of the Jefferson Davis Highway, a highway project that also patched together local projects and used publicity and maps to reify their goals; Euan Hague, "More Imagined Than Real: The Jefferson Davis Highway," *SCA Journal* 28 (2010): 14-19.

exploit Latin American labor to import inexpensive foodstuffs while creating a market abroad to export American goods.³

Paired with the goals of hemispheric and national defense and economic development, the PAH project also assuaged American psychological anxieties by promoting technocratic exceptionalism. The PAH fed into broader notions and narratives of American exceptionalism. This American exceptionalism manifested in the PAH as an effort to spread American ideals, assert technocratic primacy, and showcase American modernization. First, the PAH was a logical means by which to enter, develop, and conquer the new (southern) frontier. Paralleling the infrastructural development that transversed America in the form of railroads and highways, American economic and cultural development could likewise follow the roads into Latin America. Historian David Ekbladh contends, “By the early years of the twentieth century, the transfer of and education in technology was an inseparable part of American missionary enterprise.”⁴ This process of spreading American road technology to Latin America replaced development of the western frontier safety valve with a new southern frontier.

Second, America promoted its engineers as the best in the world. With the blank canvass that they claimed was Latin America, American engineers had an international stage on which to perform. They brought foreign engineers to America, went abroad to

³ For an overview of corporate history between WWI and the Great Depression along with a definition of the “associationalist state” and how business interacted with government, see: Ellis W. Hawley, *The Great War and the Search for a Modern Order: A History of the American People and Their Institutions, 1917-1933*, 2nd ed. (Prospect Heights, IL: Waveland Press, Inc., 1992). For two well-done histories of the Ford Motor Company and how they reflected the ideological goals of the leadership, see: Douglas Brinkley, *Wheels for the World: Henry Ford, His Company, and a Century of Progress, 1903-2003* (New York: Viking, 2003); Greg Grandin, *Fordlandia: The Rise and Fall of Henry Ford’s Forgotten Jungle City* (New York: Picador, 2009).

⁴ David Ekbladh, *The Great American Mission: Modernization and the Construction of an American World Order* (Princeton: Princeton University Press, 2009), 19-20.

survey and oversee projects, and instructed through correspondence and manuals from America. These endeavors align with an attempt to showcase the efficacy of the technocracy movement on hemispheric and world stages. Indeed, this project exemplifies historian Emily Rosenberg's model of early twentieth century "liberal developmentalists," who believed that other nations would replicate American development because the United States' "economic and social history became a universal model." This technocratic ideology "elevat[ed] the beliefs and experiences of America's unique historical time and circumstance into developmental laws thought to be applicable everywhere," boosting the work of the managerial elites.⁵ This technocratic superiority, the product of an American period in which highway engineering knowledge was formalized and decision-making centralized, gave engineers and experts significant influence in global affairs and projects.⁶ By elevating the successes of American engineers, boosters effectively contrasted American technological modernization with the perceived backwardness in Latin America.

While the Pan-American highway's justification rested on the three main tenets of security, economy, and technocracy, the project must be examined in the context of contemporaneous ideas on American expansion and foreign intervention. American

⁵ Emily Rosenberg, *Spreading the American Dream: American Economic and Cultural Expansion 1890-1945* (New York: Hill and Wang, 1982), 7.

⁶ On American exceptionalism in a postfrontier world, see: David M. Wrobel, *The End of American Exceptionalism: Frontier Anxiety from the Old West to the New Deal* (Lawrence: University Press of Kansas, 1993). For definitions of American exceptionalism in historical context, see: Ian Tyrrell, "American Exceptionalism in an Age of International History," *The American Historical Review* 96, no. 4 (Oct. 1991): 1031-1055. For the transnational exchange of ideas and expertise during the Progressive era, see: Daniel T. Rodgers, *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge: Belknap Press of Harvard University Press, 1998). For the rise of the American technocratic state as embodied in the highway program and its leading engineers, see: Bruce E. Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987). For an overview of the technocracy movement and its political impact, see: William E. Akin, *Technocracy and the American Dream: The Technocrat Movement, 1900-1941* (Berkeley: University of California Press, 1977).

politicians and jurists sought to enshrine foreign positions and assert America's hemispheric dominance by formalizing a new foreign policy that bridged the Monroe Doctrine to the Good Neighbor Policy with the ideal of "Pan-Americanism." At the turn of the twentieth century, the U.S. and Latin America engaged in a "sustained continent-wide debate over the meaning and scope of the Monroe Doctrine at the very time when the United States was attempting to redefine and legitimize [its] hemispheric hegemony." Americans, as Juan Pablo Scarfi argues, "Pan-Americanized" the Monroe Doctrine, asserting an international legal principle that embodied (previously) nationally scoped principles and ideals on expansion, development, and intervention.⁷ Pan-Americanism symbolized the legal shift from the frontier being the American trans-Mississippi West to the frontier as Latin America. The PAH, then, became a physical manifestation of a hemisphere-wide unifying legal project led by American policymakers.

This legal shift came in the context of new American concepts of expansion and development. After the historian Frederick Jackson Turner famously declared the Western frontier closed, Americans faced difficult identity-defining questions.⁸ Historian David Wrobel aptly captures the question that framed this postfrontier world: "if the frontier was the wellspring of American democracy, individualism, nationalism, and a distinctive, pragmatic national character, then what would happen to the nation and its citizens in the wake of the frontier's passing?"⁹

⁷ Juan Pablo Scarfi, "In the Name of the Americas: The Pan-American Redefinition of the Monroe Doctrine and the Emerging Language of American International Law in the Western Hemisphere, 1898-1933," *Diplomatic History* 40, no. 2 (April 2016): 189-218.

⁸ Frederick Jackson Turner, *Rereading Frederick Jackson Turner: The Significance of "The Frontier in American History," and Other Essays*, ed. John Mack Faragher (New York: Hold, 1994).

⁹ David M. Wrobel, *America's West: A History, 1890-1950* (Cambridge: Cambridge University Press, 2017), 13.

In a classic interpretation of the frontier thesis' impact on foreign policy, William Appleman Williams asserts: "a set of ideas, first promulgated in the 1890's, became the world view of subsequent generations of Americans and is an important clue to understanding America's imperial expansion in the twentieth century."¹⁰ People responded to the anxiety Turner's proclamation inspired by articulating three new modes for American expansionist ideology. First, Americans, as epitomized by Turner and Theodore Roosevelt, saw underdeveloped Latin American and African nations as the new West. These regions, like the trans-Mississippi West in an earlier era, could benefit from direct American involvement and nation building. Secondly, American government and business, as epitomized in William Howard Taft's "Dollar Diplomacy" campaign, invested in foreign infrastructure projects abroad to bolster pro-American sentiment. Taft's vision for American foreign affairs came closest to classical imperialism. Thirdly, American leadership under Woodrow Wilson turned to a policy differing from Taft's, favoring private philanthropic exchanges. In Wilson's world, foreign affairs were largely private and based on cultural and moral values. Under Wilson, then, private missionaries thrived.

The Pan-American Highway, though, does not fit neatly under any of these three models. Rather, its boosters drew on rhetoric and ideals of these different articulations of American foreign affairs. Using pieces of each aforementioned articulation of foreign policy thought, American policymakers and leaders had to develop a new model that

¹⁰ Williams argues that both Turner's concept that the expanding frontier belied the nation's and its citizenry's democratic spirit in conjunction with Brooks Adams' idea that only an expansionist foreign policy could safeguard American democracy, together catalyzed American imperial expansion: William Appleman Williams, "The Frontier Thesis and American Foreign Policy," *Pacific Historical Review* 24, no. 4 (November 1955): 379–80.



Figure 4.2: This public road map in Mixco, Guatemala shows the route of the “Carretera Panamericana,” or Pan-American Highway, section through the country. 30-N-125-1416, NARA-II.

satisfied all visions. This new model, moreover, was administered by the state. Previous foreign affairs models, on the contrary, were private enterprises, such as religious missionary efforts.¹¹ The PAH represents a new model of public-private foreign intervention, directed by state leadership.

Though the PAH embodies a shift in American foreign policy strategy, some Latin Americans interpreted the project in parallel to earlier forms of missionary activity. Some viewed the American overtures as negative and imperial, contesting the American developmentalist meaning of the highway project. Rosa E. Ficek contends

¹¹ For a basic overview of how mission systems operated across the globe with American actors, see: Liping Bu, *Making the World Like Us*; Barbara M. Cooper, *Evangelical Christians in the Muslim Sahel* (Bloomington, IN: Indiana University Press, 2006); David Maxwell, *African Gifts of the Spirit: Pentecostalism & the Rise of a Zimbabwean Transnational Religious Movement* (Athens, OH: Ohio University Press, 2006).

that road building was “produced through conflicts among state, private and civil society actors,” and during such conflicts, local individuals and leaders re-interpreted the American technologies and roads based on local needs.¹² Though local contests reveal the impact of American foreign infrastructure intervention abroad, the focus here remains on the American road strategy, discourse, and planning, revealing a project that exemplifies a crucial moment in American foreign policy and cultural development.

A Pan American Project

American engineers and businessmen first imagined a hemispheric transport connection in the late nineteenth century. In the 1860s and 1870s, they proposed a Pan-American railway. This idea gained traction during the economic tumult in America in the 1880s because the transport linkage arguably had the potential to open new markets for American businesses. The U.S. Congress voted on numerous proposals for a Pan-American railway, culminating in the formation of a committee to study the potential of such a project. The officials on this committee—American army officers, engineers, and topographers—produced surveys and maps. Though they presented this data to officials across the hemisphere, the railway endeavor effectively terminated by the turn of the twentieth century. This project failed to “garner enough support in Latin America” because of “the diversity of gauges and disagreements of the route [and] also ...

¹² Rosa E. Ficek, “Imperial Routes, National Networks and Regional Projects in the Pan-American Highway, 1884-1977,” *The Journal of Transport History* 37, no. 2 (December 2016): 129-154. The contest over meaning in space and how federal or externally-driven projects are reinterpreted in Latin America parallels the process of Western “conquest” in America. On Western conquest and development, see: William G. Robbins, *Colony & Empire: The Capitalist Transformation of the American West* (Lawrence, University Press of Kansas, 1994); Bethel Saler, *The Settlers’ Empire: Colonialism and State Formation in America’s Old Northwest* (Philadelphia: University of Pennsylvania Press, 2015).

ambivalent attitudes toward modernization that led intellectuals to draw cultural distinctions between Latin America and the U.S.”¹³ Although the Pan-American railway project remained unrealized and largely forgotten, it laid the groundwork for its successor, the Pan-American Highway.

The post-WWI world order and Good Roads Movement provided the backdrop that the Pan-American Highway project needed to gain credence, validity, and viability. Following World War I, Latin America became the subject of European and Asian interest for economic and cultural expansion, thus forcing America to safeguard its place as a hemispheric leader.¹⁴ At the International Conference of American States in 1923, the effectively nascent commission tasked with studying and developing the hemispheric railroad suggested that highways could connect the railway lines, solving the challenges of constructing a railroad through difficult terrain. In 1925, Argentina hosted an “Automobile Road Conference,” subsequently deemed the First Pan-American Highway Congress, with delegates of the Latin American states. Despite suspicion of the U.S. leadership and technical hegemonic superiority, Latin American nations supported this transnational linkage, and the 1925 conference adopted plans to undertake the construction of the Pan-American Highway, *Carretera Pan-Americana*. By this point, the United States boasted the hemisphere’s most effective national highway program with the Bureau of Public Roads administering the federal aid system.

Based on American experience in roads and the national desire to establish leadership of this Pan-American union and its projects, American engineers and

¹³Ficek, *Imperial Routes*, 132.

¹⁴ For a history of U.S. policy towards Latin America and its motivations, including the post-WWI global context, see: Lars Schoultz, *Beneath the United States: A History of U.S. Policy Toward Latin America* (Cambridge, MA: Harvard University Press, 1998), esp. 253-289.

businessmen drove the efforts to garner support and catalyze the highway project. Prior to the conference, for example, the U.S. brought engineers from the 19 countries to the United States to tour roads, automobile plants, and highway testing stations. The 1925 Pan-American Highway Congress illuminates the two goals of this program: transnational connections and commercial development. The list of conference attendees reveals a comingling of American government and business agents; in addition to the Bureau of Public Road delegation, including Chief Thomas MacDonald, civic clubs, automobile producers, and heavy machine manufacturers all attended this conference.

In 1926, the year after the first Pan-American Highway Congress, American highway officials invited a group of Latin American journalists to tour the United States. The itinerary of the tour paralleled the 1924 tour for Latin American engineers, but focused less on the technical aspects of the highway and more on its social, economic, and cultural benefits. The guides showed the ease of transport around the country, the improved access for rural individuals to attend church and school, the economic opportunities opened by the highway infrastructure, and the nationalistic attitude fomented by a connected and accessible nation. This tour, specifically crafted for journalists, aimed to foster positive public opinion of the United States and roads in Latin American nations. Many of the ideals promoted on the tour reflected the original domestic good roads propaganda from the preceding three decades: social welfare, rural development, and nationalistic sentiments. Because the road was hailed as a tool of modernization for Latin American nations through the export and implementation of an American model of development and create an American world order, American

officials worried about publicity. Positive publicity ensured Latin American support, both for the highway itself and the broader strategic goal of American hemispheric leadership. Also promoting American-style democratic liberalism, this project combatted a contemporaneous global trend towards authoritarian leadership.¹⁵ Reflecting on the success of the journalists' trip, one American road advocate wrote: "It is safe to say that an immediate and very valuable reaction has been obtained from the trip of the delegation as it has already served to focus the attention of the public on highways."¹⁶ Roads were the vehicle by which America could effectively achieve its foreign policy and economic goals, for America knew road building.

After the first conference in 1925, the Pan-American Highway Congress reconvened regularly every few years. Before the delegates continued discussion at the Second Pan-American Highway Congress in 1929, American highway advocates—engineers and businessmen—rallied domestic support. Just prior to the second PAH meeting, the U.S. Congress debated S.B. 5031, a bill concerning the "Pan American People's Great Highway." To garner support for this bill, Senator Ralph H. Cameron of Arizona wrote to Henry Ford soliciting his endorsement. As a successful businessman who would benefit from this highway, Ford's endorsement and subsequent lobbying efforts weighed heavily in Congress.¹⁷

¹⁵ Ira Katznelson, *Fear Itself: The New Deal and the Origins of Our Time* (New York: Liveright Publishing Corporation, 2013), 116-117.

¹⁶ Correspondence from Pyke Johnson to Mr. Page; For the Latin American reactions, see a collection of Latin American news clippings in the same folder, Accession 6, Box 33, folder "General Correspondence 1926—Pan American Congress of Highways," Benson Ford Research Center, Dearborn, MI (hereafter: BFRC, MI).

¹⁷ Correspondence from Ralph H. Cameron to Henry Ford, Accession 6, Box 37, folder "General Correspondence 1924—C(1 of 3)," BFRC, MI.

Senator Cameron also used the engineers' authority to promote the highway. Relying on the belief in the managerial technocratic elite, Cameron entered a letter from James Deitrick, the project's consulting engineer, into the Congressional Record. Deitrick noted that Latin American nations at that time boasted, in aggregate, only 500,000 automobiles and constructed only local roads. With the Pan-American Highway, he argued, 15,000,000 automobiles and trucks would be in daily use. Beyond connecting the 3,000 percent growth in automobiles with the world's leading automobile manufacturer, America, Deitrick laid out six reasons—all economic and developmentalist—why Americans should support the highways. The Pan American Highway project, he argued, would open land for settlement, create the potential to export metals, gems, rubber, and timber, generate a market for American automobiles. These talking points appeared regularly in support for the PAH project, for they successfully applied the tropes of the domestic Good Roads Movement propaganda to a new international context. James Deitrick informed the U.S. Senate that “Only a through highway will interest the proper working class to go to the countries and open up these vast storehouses of wealth.”¹⁸ When Congress appropriated funds for the delegation to attend the Second Pan-American Highway Congress, they did so on the grounds that American economic interests and businesses stood to profit.¹⁹ Indeed, Ralph Cameron, Henry Ford, and James Deitrick helped cement a public-private

¹⁸ Letter from James Deitrick in remarks of Hon. Ralph Cameron, on January 3, 1928, 69th Cong., 2nd Sess., *Congressional Record* 68, pt. 1:968-969.

¹⁹ *Joint Resolution To provide for the expenses of participation by the United States in the Second Pan American Conference on Highways at Rio de Janeiro*, Public Law No. 24, U.S. Statutes at Large 45 (1928): 403.

partnership that articulated a persuasive justification for the American development of the PAH.

In 1929, the Second Pan-American Highway Congress met in Brazil.²⁰ There, discussion centered around details of the route. While American engineers encouraged Latin American nations to submit route proposals, they maintained that “in the United States of America no action has been taken, nor will any be necessary for a specific route in that country.”²¹ Indeed, the route itself remained undefined. American delegates held the United States as a developed ideal that did not need to work towards a goal of a national route. While America did have the most comprehensive national road system at the time, its delegation did not define a singular point at which the route would connect with the U.S. system along the nearly 2,000-mile border.²² Though American involvement did not extend to map-making, the U.S. engineers did set the standard for which other Latin American nations needed to strive. In the delegation’s report on the Second Pan-American Highway Congress, its chairman J. Walter Drake reminded his readers of America’s progress: “Each of the Latin nations begins its work with the formulation of a code of principles which we were able to attain after years of trial and error.” American engineers had overcome these challenges, and the Latin Americans

²⁰ The Second PAHC originally planned to meet in 1928, but it was postponed a year.

²¹ Although the U.S. maintained externally that they need not select a route within the United States, many highway engineers asserted amongst themselves that Laredo, TX would serve as the PAH’s American border point. Politicians from each border state, however, sought their locality to be the crossing. San Diego’s local politicians, for example, lobbied the BPR and federal politicians for the selection of its border crossing. Quotation from: Ficek, “Imperial Routes, National Networks and Regional Projects in the Pan-American Highway, 1884-1977,” 129-154.

²² Though this conference did not declare an American border point, most leading engineers pointed towards Laredo, TX as the American terminus. Eventually, the U.S. proclaimed Laredo as the official site, setting up an international border crossing point replete with PAH signage.

“have available the results of the experience of our engineers.”²³ American engineers exported their ranking system of road improvements and the standards for construction, materials, and safety, thereby defining a hemispheric quality measure.

Though international delegates continued to correspond and countries continued to build local roads, little progress was made towards a unified transnational project. The piecemeal, local progress, however, made an impact. In the PAH’s initial stages, the production of maps reified the project. Because maps played such a central role in defining the landscape in the American psyche, the PAH maps likewise defined the hemisphere. In 1929, though, some centralized, tangible progress began. The U.S. Congress appropriated funds to begin work on the Inter-American Highway.²⁴ This investment in reconnaissance allowed the U.S. government to move forward with the IAH, the Central American portion of the PAH.²⁵ The U.S. Delegation’s report from Brazil proposed a five-year timeline for the completion of the Inter-American Highway.²⁶ This investment came just after the U.S. Congress appropriated funds that reified American technocratic leadership in the transnational highway development community based in Europe, joining the International Road Congress and hosting the subsequent IRC meeting.

²³ J. Walter Drake, *Second Pan American Highway Congress, Rio De Janeiro, August 16 to 28, 1929, Report of the Delegation from the United States of America* (Washington: Government Printing Office, 1930): 2-3.

²⁴ *Joint Resolution Authorizing the appropriation of the sum of \$50,000 to enable the Secretary of State to cooperate with the several Governments, members of the Pan American Union, furthering the building of an Inter-American highway or highways*, Public Law No. 104, U.S. Statutes at Large 45 (1929): 1697-1698.

²⁵ The Inter-American Highway was the Central American portion of the Pan-American Highway; it was separated into a separate sub-project because of its feasibility. The first Inter-American Highway Congress convened following the Second PAHC. With the election of FDR, the IAH took precedence because it came symbolized his new “Good Neighbor Policy.” For more on the IAH vs. the PAH, see: Ficek, “Imperial Routes, National Networks and Regional Projects in the Pan-American Highway, 1884-1977.”

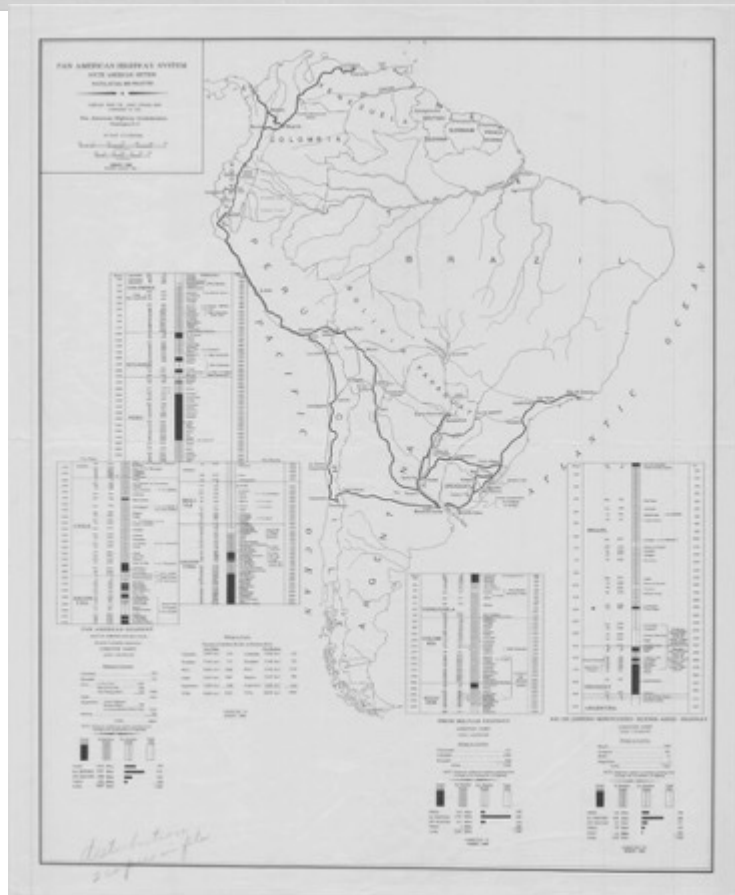
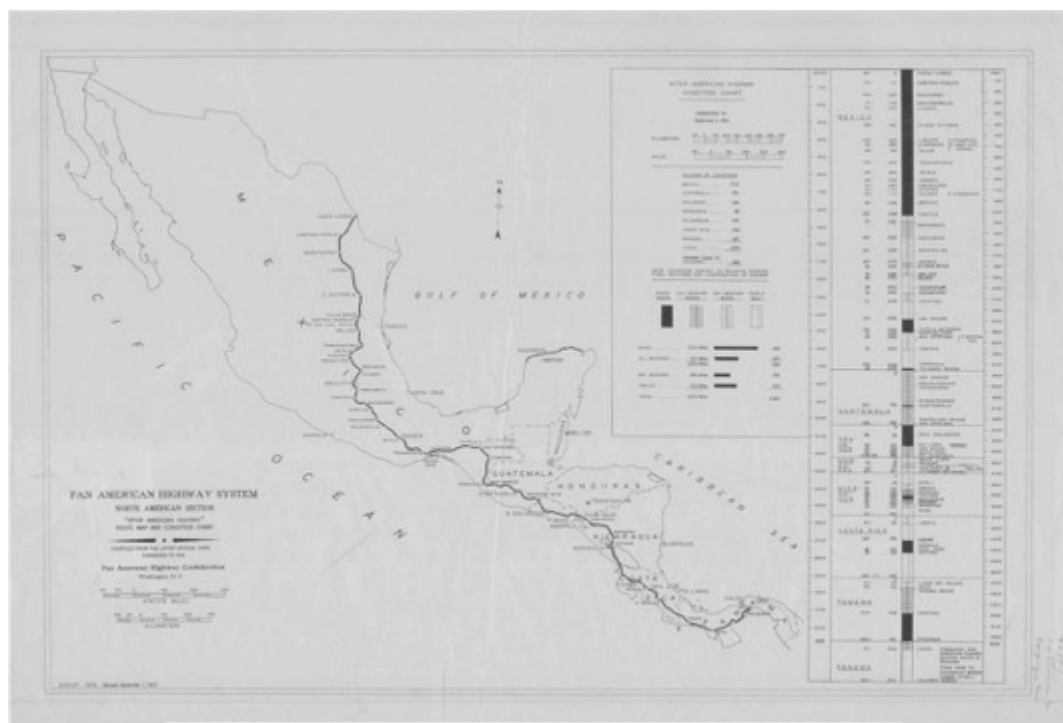
²⁶ Drake, *Second Pan American Highway Congress Report*, 27.

Using these public funds, the Bureau of Public Roads and U.S. Army undertook a reconnaissance survey of the Central American nations involved in the highway project. This reconnaissance survey used American engineers, topographers, and surveyors. The personnel travelled in U.S. manufactured and owned planes and automobiles. They produced a survey that largely spoke to the American government who sent them and the American businessmen who lobbied those politicians. Their study and report cemented American PAH goals and initiated material progress. The surveyors solidified a model in which Americans directed the technical aspects of the project, thereby asserting their expertise and leadership. Central American nations subsequently used the results of this survey to lay out roads and construct them.²⁷

BPR maps operated as another form of discourse. As these maps reified the project in the minds of many Americans, we can gain a sense of progress through WWII in terms of real road construction by looking at the maps that defined the American hemispheric consciousness. Just as the U.S. government had unified the domestic national highway system with the use of maps, so too in Latin America. In 1939 and 1940 the United States produced maps of the “North American Section” (the Inter-American Highway) and the “South American Section,” respectively, of the Pan-American Highway. Both maps were updated in August and September 1941.

The maps broke down the mileage of the 11,352-mile project by country, and they then broke down the conditions of the miles for each country into paved roads, all weather roads, dry weather roads, and trails only. By 1941, the 8,097 South American

²⁷ *Report By the Bureau of Public Roads of a Reconnaissance Survey for the Proposed Inter-American Highway from the Republic of Panama to the United States, 1933*, vol. 1-6, “Reports on Highway Studies” Folder, 30/530/24/23/1/Box 1, BPR Series, RG 30, NARA-II.



Figures 4.3 and 4.4: These BPR-produced maps of the Pan-American Highway break down the progress and construction through 1940. Maps shaped the American road consciousness, giving Americans a sense of their foreign project and its success and goals. "Pan American Highway Condition Maps Series 24, Record Group 30, Photographic Floor, NARA-II, College Park, MD.

miles were 24.9 percent paved, 51.2 percent all weather, 20.3 percent dry weather, and 3.6 percent paved. Likewise, the 3,255 miles of the Central American section were 40.3 percent paved, 22.7 percent all weather, 15.2 percent dry weather, and 21.8 percent trails. The United States, of course, still omitted its own data and roads from these maps, demonstrating a continued separation from Latin American efforts. The United States, by this omission, asserted its role as the leader of the hemisphere's highway project; its highway engineers declared that their nation did not need oversight, especially from any Latin American country. Another map (Figure 4.1), produced by Standard Oil, illuminated the discourse of conquest: "Construction of the road has been a long series of dramatic victories over nature. Jungles have been pieced, great rivers bridged, the Andes scaled."²⁸ While only about one-third of the road was paved and three-quarters navigable at some point in the year, these maps showed progress and conquest, reifying the effectiveness of American hemispheric leadership and foreign utilitarian infrastructural intervention.

Foreign Infrastructure, National Security

Understanding the American efforts to lead a hemispheric infrastructure project forces us to consider the greater context of world affairs in the decades following World War I. As policymakers resurrected the Pan-American infrastructure project in the early 1920s, we turn to America's new role in this global order, the implications of newfound influence in Latin America, and the U.S.'s strategic defense goals. Following World War I, "the American state," as Ekbladh argues, "cultivate[d] a world hospitable to its

²⁸ General Drafting Company and Standard Oil, *Pictorial Map of the Americas*, New York, David Rumsey Historical Map Collection No. 6780.003.

commercial and political interests” through a program of development and modernization.²⁹ Investment in foreign infrastructure technology—roads—linked the economics and politics of the hemisphere, establishing a strategic U.S.-foreign endeavor that ensured mutual defense through prosperity.

The PAH came in the context of a shift in American foreign policy that enlisted economic well-being to secure national defense: a strong nation was prosperous, and a prosperous nation was strong. This new policy favored investment over limited military engagement, and it came in the context of some Americans calling for isolationism. The Treaty of Versailles, which ended World War I and established the League of Nations, died in the Senate; it died, however, at the hands of a minority faction. Bear F. Braumoeller argues that “the characterization of America as an isolationist in the interwar period, when isolationism supposedly reached its peak, is simply wrong.”³⁰ Braumoeller contends that American foreign policy changed shape, rather than receded: “The security policy of the 1920s was relatively invisible because, thanks to America’s overwhelming strength, it could rely on banks rather than tanks.”³¹

Charles Evans Hughes, Secretary of State under Warren Harding and Calvin Coolidge, focused on economic development throughout Latin America as an early iteration of foreign nation building, implementing programs contemporaneous with the highway that demonstrated America’s shift from military engagement to cooperative prosperity. This new Pan-Americanism manifested in the removal of a military mission from Cuba, the ratification of a treaty with Columbia concerning the Panama Canal, the

²⁹ Ekbladh, *Great American Mission*, 25.

³⁰ Bear F. Braumoeller, “The Myth of American Isolationism,” *Foreign Policy Analysis* 6, no. 4 (September 2010): 349-371.

³¹ *Ibid.*

withdrawal of a military mission from Nicaragua, and arms limitation and economic development programs throughout Latin America to stabilize the region.³² After World War I, “internationalists and liberals renewed their focus on development” because they “promised to harness the forces of modernity to provide better standards of living.”³³

With the new Pan-American foreign policy defined by economic cooperation and informal power instead of military might and intervention, the PAH served to further American hemispheric interests. This highway helped bolster an economy throughout Latin America that would ensure American primacy, both with political influence and in terms of import and export opportunities. Mutual prosperity ensured America’s national protection through both established mutual dependencies and continued resource and material sharing. In 1925, Thomas MacDonald, the Chief of the Bureau of Public Roads and one of the PAH’s most prominent boosters, delivered the speech “Our International Relations as shown by Pan American Road Congress at Buenos Aires.” This speech articulated how the PAH and this model of economic and infrastructural cooperation would have an influence “upon the progress of the world’s civilization.” More importantly, he defined the PAH as a means of hemispheric security: the PAH physically represented the freedom and independence that this united bloc had secured and would continue to secure through road development. This independence freed the west from any European involvement or encroachment. MacDonald defined the United States’ role in Latin America through his vision of highway progress and cooperation towards mutual economic prosperity, claiming: “This conclusion is so profoundly true that it is the conviction of the Delegation from the United States to the

³² Hawley, *Great War*, 51-52.

³³ Ekbladh, *Great American Mission*, 38.

Road Congress that in the field of transportation is the greatest opportunity for helpfulness that exists and that this field at this time is limited to highway transport.”³⁴

In 1928, Undersecretary of State J. Reuben Clark wrote a memorandum that enshrined this new form of military isolationism coupled with economic interventionism. Clark wrote a policy memorandum that challenged the Roosevelt Corollary to the Monroe Doctrine. This memorandum “reframed the doctrine as a case of the United States vs. Europe, rather than the United States vs. Latin America.”³⁵ This legalist interpretation challenged politicians’ use of the Monroe Doctrine as justification to intervene in Latin America. The Clark Memorandum codified a declaration of non-military intervention in Latin America, signifying an important shift to economic, rather than military means to achieve policy.

In the same year that J. Reuben Clark wrote his policy memorandum, President-elect Herbert Hoover traveled to Latin America. Between November and December, Hoover visited Honduras, El Salvador, Nicaragua, Costa Rica, Ecuador, Peru, Chile, Argentina, Uruguay, and Brazil. Hoover reflected: “I made a journey through South America prior to inauguration for the purpose of dissipating the fears and antagonisms which had grown up amongst these States as to the intentions and policies of our Government.”³⁶ One of the fears he wished to quell was that the United States would

³⁴ Speech entitled “Our International Relations as shown by Pan American Road Congress at Buenos Aires,” Nov. 1926, Box 6, Folder 65, Series 1: Personal, THM Collection, Cushing Library, TAM.

³⁵ The memorandum was not published until 1930. Juan Pablo Scarfi, “In the Name of the Americas: The Pan-American Redefinition of the Monroe Doctrine and the Emerging Language of American International Law in the Western Hemisphere, 1898-1933,” *Diplomatic History* 40, no. 2 (April 2016): 189-218; Ellis W. Hawley, *The Great War and the Search for a Modern Order: A History of the American People and Their Institutions, 1917-1933*, 2nd ed. (Prospect Heights, IL: Waveland Press, Inc., 1992), 96.

³⁶ Quoted in: Alexander DeConde, “Herbert Hoover’s Good Will Tour,” *The Historian* 12, no. 2 (1950): 169.

force debt repayment through military intervention. To appease concerns, in Latin America, President-elect Hoover announced an important policy decision that highlighted the PAH and IAH's respective importance: no debt, he declared, would be collected through force and military intervention. American debt collection, he contended, relied on economic success in Latin America, and that success, highway advocates argued, relied on security and infrastructure development.³⁷ Hoover's policy highlighted the new emphasis on mutually-beneficial economic stability to achieve both strategic national security goals and prosperity, and the ongoing PAH project was one way to achieve hemispheric prosperity through technological modernization.

This policy continued after Hoover and Clark's tenure ended, and it received support outside the Executive Branch. President Roosevelt defined this economic developmentalist program as his "Good Neighbor Policy." Although Congress enacted trade protectionism and isolationism in the 1920s and early years of the Great Depression with, for example, the 1921 Emergency Tariff Act, 1922 Fordney-McCumber Tariff, and 1930 Smoot-Hawley Tariff, American politicians reversed course in the later Hoover years and under FDR, re-establishing the focus on international trade and development, especially with Latin American nations. In 1934, for example, President Franklin Roosevelt signed the Reciprocal Tariff Act, giving him the power to negotiate bilateral tariff agreements. The Reciprocal Trade Agreement Act, as it was often called, allowed Roosevelt to secure special trade relationships with Latin American countries. In the same year, President Roosevelt established the Export-

³⁷ For Hoover's public speeches in Latin America, see: *Addresses Delivered During the Visit of Herbert Hoover President-Elect of the United States to Central and South America, November-December 1928* (Washington, D.C.: Pan American Union, 1929).

Import Bank of the U.S., a credit agency designed to build foreign nations and establish positive trade relationships. Loans and credit from the Export-Import Bank, in fact, went directly to Pan-American Highway construction, supporting development in Argentina, Bolivia, Chile, Columbia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, and Peru.³⁸ Aside from the Smoot-Hawley Tariff of 1930, the 1920s and 1930s revealed a sustained effort to shift foreign policy to investment-based processes. Nation building became the central agent that secured America's strategic national security goals, and the Pan-American Highway represented one of America's greatest forays in the western hemisphere into this new policy process.

This new foreign policy of economic cooperation and Latin American dependence differs from the discourse of protectionism invoked to build highways across the United States. Highway advocates invoked a national strategic highway program as a means of national domestic defense. This domestic defense, however, did not come because of economic strength, but because of the transportation and supply networks that allowed troops and materials to easily travel the nation in times of crisis. This framework is important to understanding American policy, both domestic and foreign, in the 1920s: domestic national defense centered on military might and power, while national security concerns abroad manifested in economic interdependency and infrastructure networks. In Latin America, so the argument went, economic prosperity would link the Latin American nations with the United States and create an unbreakable bond. In times of crisis, this bond—and dependence—would function as a safeguard

³⁸ On the Export-Import Bank of the United States, see: William Becker and William McClenahan, *The Market, the State, and the Export-Import Bank of the United States* (New York: Cambridge University Press, 2003)

against any European or Asian invasion. The highway project represents the new military isolationism coupled with an economic interventionist foreign policy.

Expanding the American Economy

When American engineers first imagined the Pan American railway in the late nineteenth century, the project reflected an era in which politicians and businessmen conceived of unbridled growth, both in terms of railroad infrastructure and the American economy more generally. Railroads, however, collapsed in dramatic fashion.³⁹ The project then went dormant. When engineers, businessmen, and politicians re-conceptualized the project as the Pan American Highway, they again reflected American prosperity and technological success in the 1920s. The prosperity, albeit uneven, of the 1910s and 1920s, was epitomized by the car revolution and consumer culture. With the democratization of the automobile and the uplift of workers (epitomized by Henry Ford paying his workers \$5 per day), Americans once again dreamt big, and much of the future growth centered around the automobile and highways. The profit imperative catalyzed by the car revolution played out in many arenas, including, for instance, tourism and modernization.

This theory that roads would modernize the Latin American economy, coupled with the profit imperative, drove the PAH infrastructure project, and it manifested in myriad ways. First, the project created a shift in American government-business cooperation in which both sides supported one another in foreign projects. Second, PAH

³⁹ On the growth of the North American railroad business, its financial deviance, and its ultimate consolidation and crash, see: Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: W.W. Norton & Company, 2011).

boosters cast the project in a framework of economic opportunity: Americans would open a new market for exports, could import inexpensive foodstuffs and mine natural resources, and would reap both the economic and cultural benefits of international touristic opportunities. Third, American goods and ideas abroad could catalyze a culture shift in which Latin American nations modernized. Roads, then, extended American influence abroad through economic planning and leadership.

America's highway project in Latin America sparked a new relationship between business and government. Although each partner had somewhat separate goals (economic opportunity; security and political influence), they established a reciprocal relationship in which both sides could realize their goals. In the 1920s, private automobile interests played a significant role in developing the project. Attendance lists of the 1925 Automobile Road Conference and the Second Pan American Highway Conference reveal that the majority of American delegates came from the private sector.⁴⁰ The American delegates in 1929 also represented diverse interests: representatives went, for example, from the Ford Motor Company, the Western Wheeled Scraper Company, the American Society of Civil Engineers, Standard Oil, the American Road Builders Association, and the American Institute of Mining and Metallurgical Engineers. While many businesses held a stake in the future of the infrastructural project, so, too, did the American press. Harry Chandler, the publisher of *The Los Angeles Times*, sat through the Pan American Highway Congress. MacDonald invited Chandler to the PAHC because MacDonald knew the importance of good domestic press to support the economic implications for American corporations that

⁴⁰ "Key to Personnel of Pan American Activities," Box 7, Folder 123, Series 1: Personal, THM Collection, Cushing Library, TAM.

guided the project. Because government appropriations and political support were shaped in the crucible of public opinion, MacDonald sought to engineer support.

Through the PAH, the government and business founded an intimate relationship in which both parties benefitted. The businesses represented both themselves and their government, fostering support for the foreign project goals and their professional services. The government allowed the businesses to take a leading role because the government sought a successful project, regardless of the parties involved. The Bureau of Public Roads' press office disseminated press releases lauding the efforts of the businessmen and engineers in Latin America. MacDonald, too, used the press, such as in the case of Chandler in Brazil, to garner positive publicity for the project. The businesspeople reciprocated. By the late 1920s, automobile manufacturers and distributors had an international network. This international position created inroads abroad, and it gave the car companies an opportunity to shape public opinion in Latin America.

Edsel Ford of the Ford Motor Company worked closely with Roy Chapin of the Highway Education Board and founder of the Hudson Motor Company to build momentum for this Latin American project. In correspondence about the Pan-American Highway Commission doing some of the "finest things that has ever been done to stimulate road activity in South America," Ford offered to "write to the manager of our plant in Sao Paulo, Brazil, and endeavor to carry a certain amount of good roads propaganda through our advertising down there."⁴¹ Ford knew that a completed hemispheric highway would only help his company's business in Latin America, so he

⁴¹ Correspondence from Edsel Ford to Roy Chapin, 1924, Accession 6, Box 15, folder "General Correspondence 1924—Co-Cy," BFRC, MI.

worked with the government to foster this economic growth. James Deitrick, the project's lead engineer, for instance, already estimated nearly 15 million new automobiles would be needed in Latin America with the completion the road. Beyond the profit imperative, Ford was motivated to develop Latin America in the image of the United States, and the scope of his project to American-ize Latin America extended beyond this highway project. For example, Henry Ford established Fordlandia in the Brazilian Amazon, inspired by his "desire to re-create a bygone America." In this town, Ford attempted to replicate his idyllic America, replete with Prohibition enforcement (though Brazil had no laws against alcohol), central squares, manicured lawns, electric refrigerators and washing machines, square dances, and poetry recitations.⁴² Contemporaneous with Ford's efforts to literally recreate a U.S. city in the Amazonian jungle, the Ford Motor Company worked with the American government and other industry officials to export Americanism through infrastructure and economic development. In part motivated by his nostalgic vision of a fleeting American society and in part motivated by the lucrative potential of this untapped market to which he could sell automobiles, Ford epitomized the dual motivations of this project: modernization and profit.

In addition to spurring automobile sales, the project had the potential to boost sales of road building machinery. The machine producers sought a new market for their goods, and this project offered an incredible opportunity. To enlist the support of these businessmen, the BPR helped translate books on highway development into Spanish "as

⁴² Grandin, *Fordlandia*, quotation on 7-8.



Figure 4.5: The original caption in the BPR's photographic collection of building the PAH reveals the explicit comparison of Latin America with the United States, as well as the American technocratic and mechanic superiority, with the road providing an economic opportunity for American companies: "Streets of El Salvador are paved in as modern fashion as most cities of the United States. Here some American equipment is in operation." 30-N-12-33-208, NARA-II.

a stimulus to the sale of American road-making appliances."⁴³ Government agents actively worked with business interests to create a diverse coalition that would lobby for this road. After this cooperative international effort saw success, President Franklin D. Roosevelt eventually codified the model in 1940, establishing the Office of Coordinator of Commercial and Cultural Relations between the American Republics, which was initially led by Nelson Rockefeller.⁴⁴ Despite the oblivious involvement of American businessmen, government agents and businessmen alike needed to reassure

⁴³ Memorandum Regarding the Translation of Highway Material, Jan. 4, 1928, Folder 1, 59/250/23/31/4/Box 7457, "General Records of the Department of State" Series, RG 59, NARA-II.

⁴⁴ Appointment of Nelson Rockefeller to Office of Coordinator, Aug. 16, 1940, "Coordinator of Interamerica Affairs, Program" Folder, 59/250/44/8/1/Box 1, "General Records of the Department of State" Series, RG 59, NARA-II.

the public that the project was free from corruption or hidden motivations, especially after the Harding administration had just been rocked by its fair share scandals, including, most notably, Teapot Dome. A group of businessmen released a statement after they subsidized a group of Latin American delegates to tour the United States in the 1920s: “The most striking aspect of the trip is that while it has been financed from contributions from the motor, machinery, rubber, steamship and other industries, the purpose is in no sense, an effort to sell the visitors American goods.”⁴⁵

As the government worked with businesses, the reconnaissance material collected by the government surveyors reflected the interest of the stakeholders, including American businessmen. With the more feasible Central American portion of the PAH, the Inter-American Highway (IAH) project, imagined in the late 1920s, American road stakeholders saw a real path forward on which progress could immediately be made. The U.S. Congress, in 1929, underwrote a reconnaissance survey of the seven countries through which the IAH passed: Mexico, Guatemala, Nicaragua, Panama, Honduras, and Costa Rica. The survey focused on the six countries, excluding Mexico, because Mexico had not requested American reconnaissance; they had been involved in a “systematic and farsighted program of highway construction” already.⁴⁶

The survey served American needs and goals, both in the way it was conducted and the results its authors presented. The Bureau of Public Roads and U.S. Army conducted this survey without the substantive assistance of local engineers,

⁴⁵ Facts About the Pan American Highway Commission, Accession 6, Box 17, folder “General Correspondence 1924—Highway Education Board,” BFRC, Dearborn, MI.

⁴⁶ *Report By the Bureau of Public Roads of a Reconnaissance Survey for the Proposed Inter-American Highway from the Republic of Panama to the United States, 1933*, 6:603, “Reports on Highway Studies” Folder, 30/530/24/23/1/Box 2, BPR Series, RG 30, NARA-II.

topographers, or officials. Instead, American engineers and surveyors traveled south, bringing their own equipment and transportation, to conduct the survey. The authors presented their data in a comprehensive six volume report that covered all crucial aspects of highway development, including routes, soil data, existing infrastructure, supply and material opportunities, topographical data, and climate information. In addition to this information that would serve the engineers who would oversee the work, the U.S. Congress mandated that “mindful of the importance of highway construction in relatively undeveloped countries,” the surveyors include economic data. In fact, economic data comprised the majority of the final report.

Each country received its own portion of the survey report, and each country’s data was broken into four sections; General Section, Economics Section, Technical Section, Plan and Profile. In a preface to the volumes, the authors laid out their summative determination: “With road connections established, the resultant benefits of exchanged goods, in development of natural resources, in growth of tourist traffic, in higher standards of living in areas hitherto barred from economic progress by lack of communication, and in interchange of ideas and international amity, appear manifest.”⁴⁷ This terminology may have been coincidental. “Manifest,” perhaps the authors decided, was the most precise term for foreign infrastructure development designed to raise standards of living. But, in a 1920s American society, whose recently-closed western safety valve that had been conquered and populated with the intellectual backing of “manifest destiny,” the word choice may have not been so coincidental. Indeed, the

⁴⁷ *Report By the Bureau of Public Roads of a Reconnaissance Survey for the Proposed Inter-American Highway from the Republic of Panama to the United States, 1933*, 1:21, “Reports on Highway Studies” Folder, 30/530/24/23/1/Box 1, BPR Series, RG 30, NARA-II.



Figure 4.6: This English sign, in Nicaragua, shows the United States and its people taking credit for the project. Although the sign notes the governmental cooperation, it gives credit to an American contractor and the U.S. War Department. The English language sign provided comfort to American tourists and marked the space. 30-N-127-2133, NARA-II.

survey regularly attributed the lack of Latin American development to the “lack of colonization.”⁴⁸ The government laid bare its imperial tendency, as its authors declared: “Lands made available by [the highway] will afford further opportunity for development by colonization and diversification of products. That the Central American sense the need of immigrant colonists is shown by several attempts made in the past few years to bring them in.”⁴⁹ This report is steeped in the language of imperialism, showcasing the American goal to use the project to develop Latin America. The language, beyond its imperialistic tropes, reflects earlier American Western boosters’ development literature.⁵⁰

⁴⁸ *Ibid.*, 1:27.

⁴⁹ *Ibid.*

⁵⁰ For an overview of Western booster literature and the discourse therein, see: David M. Wrobel, *Promised Lands: Promotion, Memory, and the Creation of the American West* (Lawrence: University Press of Kansas, 2002).

Beyond this imperialistic rhetoric, the authors delved into the economics of building the highway, making a strong case for American investment. In Panama, for example, the authors determined that the total import to Panama from the United States fell from 68 percent to 61 percent between 1929 and 1931. The shift, which they attributed to the rise in British and Japanese goods, could be stymied by effective infrastructure that allowed for the more cost-efficient importation of American goods.⁵¹ Road infrastructure, economic interdependency, and technological modernization, the authors argued, could reverse this trend, in Panama and throughout Latin America. The surveyors made the economic case for every nation. In Costa Rica, for instance, they found that most of the mahogany and Balsa wood was exhausted. But, “With proper highway communication [Senor don Fernando Castro] believes the total amount available in the country would be in the neighborhood of 100,000 cubic yards.” The United States imported practically all Costa Rican Balsa wood.⁵²

Beyond noting the specific goods that could be exported, such as Balsa from Costa Rica, rice from Nicaragua, or coffee from El Salvador, the authors of the report included data on American investments in the six nations. At the end of 1930, Americans taxpayers and corporations jointly had invested over \$75 million in Guatemala, over \$13 million in Nicaragua, over \$71 million in Honduras, nearly \$35 million in El Salvador, over \$46 million in Panama, and over \$32 million in Costa Rica. Including the amount U.S. invested in Latin America in this report served multiple purposes. First, it quantified the degree to which it would cost Americans to abandon

⁵¹ *Report By the Bureau of Public Roads of a Reconnaissance Survey for the Proposed Inter-American Highway from the Republic of Panama to the United States, 1933*, 2:63, “Reports on Highway Studies” Folder, 30/530/24/23/1/Box 1, BPR Series, RG 30, NARA-II.

⁵² *Ibid.*, 3:107.

Latin America or lose influence to other European nations. Second, it encouraged businessmen and government agents to work together, since both had a stake, either through tax revenue or lost investment. Third, it allowed the reader to put into perspective the amount at stake with the estimated cost to build the highway: if approximately \$277 million had already been invested into a region without good infrastructure and transportation networks, would an additional investment of between \$30 million (at the lowest) and \$101 million (at the highest) really be illogical?⁵³ The highway, as the survey's authors reminded the reader throughout the report, had the potential to be "an excellent trade missionary," opening a new market for U.S.-manufactured goods and expanding the sources from which the nation could import cheap Latin American products and materials.

The reconnaissance survey informed politicians and businessmen of the economic benefits of the international road project. The BPR's press office boosted the road to the public. This project required promotion, especially during the Great Depression when businessmen and taxpayers alike were asked to foot the bill for a highway in Latin America while millions of Americans remained without work. The BPR released regular press statements throughout the 1930s touting the benefits of the road, economically and culturally.⁵⁴ The public relations division echoed the results of the survey, explaining the "technical feasibility" of the project and the boon to American

⁵³ The surveyors designed three types of road based on different construction standards, and they offered different cost estimates for each iteration of the 1,518.4-mile road: \$30,409,354.47 for a Type 1 road, \$37,645,822.05 for a Type 2 road, and \$101,361,208.40 for a Type 3 road. For more, see: "Recommended Construction Standards" in *Ibid.*, 1:37. Although economists would decry this thinking as irrational and demonstrative of the "sunk cost fallacy," the PAH boosters nonetheless employed this rationale.

⁵⁴ See, for examples, press releases of Oct. 20, 1931; Jan. 21, 1930; Nov. 19, 1934; Nov. 6, 1935; June 9, 1941 in: 530/24/22/1/Box 8, BPR Series, RG 30, NARA-II.

economic interests. As construction got underway in the late 1930s, the press office declared their motivations for the road: "Lack of transportation alone has prevented development of these resources, and the building of a road such as the Inter-American Highway, now under construction, as a truck-line route through the Central American republics, will tap immediate and extensive riches."⁵⁵ Throughout the process of lobbying for the roads, the advocates regularly invoked the fact that the IAH and PAH would create a demand for increased American imports in Latin America.

While the explicit economic profit motive loomed large, especially in the context of the need for revenue and employment during the Great Depression, the road boosters also saw a potential for profit in the tourist business. The PAH and IAH, promoters declared, attracted new tourists. These motorists, both U.S. and Latin American helped the United States economy as they traveled throughout the hemisphere. The touristic infrastructure also helped solidify America's position as the hemispheric leader by catering to American tourists specifically. In 1931, for instance, the BPR publicized the Mexican government's move to assign a special police force to the new international highway. The officers of this special police force, the BPR informed traveling U.S. citizens, spoke both English and Spanish, and these officers wore small national flags on the uniform indicating their linguistic ability. All officers, then, wore at least Mexican flags indicating their knowledge of Spanish and U.S. flags representing their English abilities.⁵⁶ The Mexican government catered to the American tourist trade, and it aesthetically marked its own federal police officials with a foreign

⁵⁵ Inter-American Highway, June 9, 1941, "1941" Folder, 530/24/22/1/Box 9, BPR Series, RG 30, NARA-II.

⁵⁶ "Inter-American Highway Attracting Many Tourists," Oct. 20, 1931, "1931" Folder, 530/24/22/1/Box 8, BPR Series, RG 30, NARA-II.

flag. Indeed, as construction workers extended the IAH, tourists populated it, and tourists from the U.S. constituted a large part of this international tourist business. Ed Fletcher, the California State Senator representing the border-town of San Diego, declared in 1934: “Good roads make for better understanding between nations, one of the other, while profit from tourist travel will bring untold millions.”⁵⁷

The new model of business-government cooperation for economic growth is revealed most clearly at the 1939 World’s Fair in New York, where General Motors Overseas Operations erected nine displays, including the Pan American Exhibit of World Horizons. On a massive globe, the Pan American Highway went through the western hemisphere. Memorializing the event, the leaders of government and business



Figure 4.7: Inspecting the “Pan American Exhibit of World Horizons” of the General Motors Overseas Operations, (left to right) Graeme K. Howard, Vice-President of GM Corporation and GM Overseas Operations, Congressman Wilburn Cartwright, Thomas H. MacDonal, Chief of Bureau of Public Roads, and Edgar W. Smith, Vice-President of GM Overseas Corporation. Courtesy of

⁵⁷ Correspondence from Ed Fletcher to President of Mexico, June 1934, Box 11, Folder 7, Series 2: Inter Agency, THM Collection, Cushing Library, TAM.

posed in front of the globe. Congressman Wilburn Cartwright of Oklahoma and Chair of Congress' Committee on Roads, Thomas H. Macdonald of the Bureau of Public Roads, and Graeme K. Howard and Edgar W. Smith, both of General Motors Corporation, posed for a picture in front of the exhibit. With the exhibit, General Motors released a statement declaring that the business-government international venture created "a modern thoroughfare [that] dramatizes motor progress and widens the cultural horizon of the Americas."⁵⁸ Every man posing in that picture knew the reason was more than broadening cultural horizons; Americans saw the economic opportunity in Latin American infrastructure.

National Exceptionalism, International Technocratic Excellence

In addition to the economic benefits of infrastructure investment, the highway offered American engineers the opportunity to assert global technocratic primacy. Throughout the 1920s and 1930s, American highway engineers and diplomats developed a three-pronged approach to international assistance. This approach became the basis for post-World War II foreign aid and development programs. The model included three fundamental tenets: supplying literature and technical direction and planning, hosting foreign individuals for courses and tours, and participating in international conferences. Each of these facets of American foreign infrastructure intervention allowed both American engineers to accrue international prestige and the state to develop its influential role in world affairs.

⁵⁸ New Release from General Motor's Overseas Operations, May 1939, Box 11, Folder 8, Series 2: Inter Agency, THM Collection, Cushing Library, TAM.

First, America received foreign delegates both to teach about highway construction and to showcase American success. The first significant entrée into bringing foreign delegates to America to teach them about the highway program was in 1924 when American policymakers brought delegates from 19 Latin American nations to tour the United States. The national press reported on this trip just as the BPR promoted it: “The republics of Latin America ... have sent a mission of highway engineers to this country to gather data and solicit assistance for their plan for a great program of road building through Central America and South America.”⁵⁹ The journalist echoed the engineers and politicians: for any Latin American nation to establish a great road program, they needed to learn from American success.

This 31-day tour across the United States, according to a bulletin from the National Automobile Chamber of Commerce, showed “a cross section of industrial, economic and social life through visits to many large raw material plants, farms, universities, and homes and churches.”⁶⁰ The delegates followed a detailed and carefully planned itinerary that brought them through North Carolina, Kentucky, Illinois, Minnesota, Wisconsin, Michigan, Ohio, Pennsylvania, New Jersey, and New York. Thomas MacDonald and W.C. Markham, representatives of the Bureau of Public Roads and American Association of Highway Officials, respectively, led the tour. The BPR and AASHO leaders gave “the delegation an insight into Federal, state and local highway development which could not have been obtained elsewhere.”⁶¹ The trip used

⁵⁹ Newspaper Clipping from Jun. 27, 1924, Accession 6, Box 15, folder “General Correspondence 1924—Co-Cy,” BFRC, MI.

⁶⁰ National Automobile Chamber of Commerce General Bulletin July 9, 1924, Accession 6, Box 15, folder “General Correspondence 1924—Co-Cy,” BFRC, MI.

⁶¹ *Ibid.*

tangible examples of roads, factories, and plants to highlight the success of the American road building program.

While public officials led the trip, the foreign delegates met with businessmen and engineers. As the Highway Education Board explained to various state highway departments, the project was “non-commercial and educational.” Despite claiming the trip was non-commercial, they did explain the trip included “government officials, commercial organizations, manufacturers, exporters and importers, and shipping interests ... [and] men in public life, editors, newspaper men, college presidents, professors, students, scientists, and travelers, suppling information.”⁶² When they visited Dearborn, MI, for instance, Henry Ford welcomed them and showed them the film “Road to Happiness,” which, as Roy Chapin later explained to Edsel Ford, made an impact: “They all seemed to think it would make a fine propaganda movie for their countries.”⁶³

The PAH offered America an opportunity to experiment with different models of educating foreign visitors, and American highway advocates ultimately landed on a program that brought delegates into contact with public officials, businessmen, and the products—cars and roads. “The purpose of the visit of the Latin American delegation,” Thomas MacDonald explained, is “to place before the leading engineers of the twenty Latin American countries the benefit of two decades and more of experience of United States engineers and economists.”⁶⁴

⁶² General Statement of Information for the State Highway Departments Pertaining to the Visit of Latin American Delegates, May 31, 1924, Accession 6, Box 17, folder “General Correspondence 1924—Highway Education Board,” BFRC, MI.

⁶³ Correspondence from Roy Chapin to Edsel Ford, Accession 6, Box 26, folder “General Correspondence 1925—P(1 of 2),” BFRC, MI.

⁶⁴ Facts About the Pan American Highway Commission, Accession 6, Box 17, folder “General Correspondence 1924—Highway Education Board,” BFRC, MI.

Second, the United States became an informational guide by supplying useful data and instruction. Beginning in the 1920s, Americans used their road building experience to inform their Latin American counterparts. Delegates from Latin America often requested information from engineers. Roy Chapin, for instance, informed Edsel Ford: “A constant flow of letters have been received by the Highway Education Board, Bureau of Public Roads, Pan American Union, asking for technical and educational information on of the subject of highways from the delegates of various countries.”⁶⁵ This information-sharing network paralleled how the domestic road system grew through the first two decades of the twentieth century: diverse local engineers needed information and the U.S. federal government asserted itself as a centralized information broker.

In the 1930s, the United States expanded the scope of its information services to include film programs. In 1930, the BPR released a statement, declaring: “U.S. Highway Films Interest Audiences in South America.”⁶⁶ The USDA, by 1930, produced and distributed over 250 unique films. Governments around the globe purchased these films.⁶⁷ In 1932, the USDA released a six-reel film for distribution abroad. This film, unlike many previous productions, had sound. The film, *An International Study of American Roads*, showed the U.S. highway system, highway construction methods, and highway engineering activities. Despite its deceptive title, the movie was an American study of American roads to be used to promote the country’s road making achievements

⁶⁵ Ibid.

⁶⁶ “U.S. Highway Films Interest Audiences in South America,” June 6, 1930, “1930—Press Releases” Folder, 530/24/22/1/Box 8, BPR Series, RG 30, NARA-II.

⁶⁷ Including the Latin American nations, the films found reception in Dominion of Canada, South Africa, New South Wales, Belgium, Holland, Japan, Turkey, Germany, the Soviet Union, Australia, and India.

and methods abroad.⁶⁸ Film education became a central plank of American educational methods, for it targeted both engineers and the broader public.

The efforts to educate foreign highway engineers succeeded. In their efforts to make the PAH in the image of the U.S. highway system, American foreign engineering boosters succeeded. Latin American countries replicated both the administrative organization of the BPR and the standards and mechanisms in the road building process. In the years after the 1925 Pan American Highway Conference, eight national federations of highway education and oversight had been established: Argentina, Brazil, Chile, Colombia, Cuba, Honduras, Peru, and Uruguay. A Highway Commissioner in Chile prepared a 300-page summary of transportation in the U.S. “with special application to conditions in Chile.” In Argentina, a member of the Highway Commission introduced a model highway law “based on his studies of the Federal Aid Highway Act.” In Venezuela, Senor Ibarra Cerezo, the Director of Roads, prepared a “technical study of high order applying the lessors which are to be learned form the highway practices in [the U.S.] and to be applied to Venezuela.” Throughout Latin America, highway delegates and engineers looked to America for guidance on road building practices, and they modelled their own programs on the United States.⁶⁹ American officials and engineers, in turn, promoted how Latin America replicated the successful United States highway system, highlighting America’s global scientific leadership.

⁶⁸ “U.S. Highway Featured in Sound Film,” May 20, 1932, “1932” Folder, 530/24/22/1/Box 8, BPR Series, RG 30, NARA-II.

⁶⁹ On each Latin American country’s implementation of the United States’ highway model, see: Pan American Highway Notes, Accession 6, Box 26, folder “General Correspondence 1925—P(1 of 2),” BFRC, MI.

Third, America asserted its international technocratic primacy by participating in—and leading—international conferences. America’s participation in the International Road Congresses intensified throughout the road building period (see Chapter Three), finally culminating in the decision to become a permanent international member in 1928 and hosting the first conference outside of Europe a few years later. This rise in international information sharing and participation paralleled the interest in Latin American roads. While American engineers became involved in international conferences, they also became involved personally with individual Latin American countries. While international conference participation accorded respect on a global level, Americans could assert dominance in individual nations by participating directly there. In the 1930-33 reconnaissance survey, the sole participation of American engineers reveals much about asserting American technocratic knowledge. In addition, American highway officials sent individual engineers to Latin American countries to oversee work there. A.K. Hastun, for example, spent the 1930s stationed as the American engineer in Puerto Rico, then Guatemala, then Venezuela, then Paraguay.⁷⁰ Nicaragua, in the 1930s, had four American engineers visit “to assist with road construction problems.”⁷¹ American engineers used their platform in these nations to showcase their education and knowledge, defining the most efficient and effective road construction techniques.

⁷⁰ Index, Engineers from U.S. Assigned to Venezuela, Page 96A Box 7, Folder 123, Series 1: Personal, THM Collection, Cushing Library, TAM.

⁷¹ Index, Engineers from U.S. Assigned to Argentina, Page 23 Box 7, Folder 123, Series 1: Personal, THM Collection, Cushing Library, TAM.

Conclusion

The Pan-American Highway modernized Latin American nations—or, at least, that was its articulated intention—while it ushered in a new American foreign policy. Behind a rhetoric of modernizing progress, the PAH sought to assert American hemispheric leadership and expand the U.S. economy. This infrastructural road project shaped U.S. foreign policy and provided American officials and businessmen a foothold in economic and cultural relations abroad. In the first decades of the American century, the United States asserted hemispheric leadership through technocratic exceptionalism and economic development. Following World War I and the close of the western frontier, this foreign policy shift unfolded due to three primary motivators: global security, economic opportunity, and technocratic exceptionalism. The American highway bureaucracy used roads to assert a hemispheric presence and define its leadership role, and they set a model that would be widely used following World War II when American leaders tried to spread American ideals and defeat the spread of Soviet communism with nation building projects and development.⁷²

Over the course of the PAH project in the 1920s and 1930s, Thomas MacDonald regularly traveled through Latin America. As the head of the Bureau of Public Roads, he oversaw this project's American leadership team. On these trips south, MacDonald brought delegations of American politicians and businessmen to survey the progress of the Pan-American highway, met with senior Latin American officials and highway

⁷² On Cold War infrastructure development and nation building projects, see: David Ekbladh, "Mr. TVA: Grass-Roots Development, David Lilienthal, and the Rise and Fall of the Tennessee Valley Authority as a Symbol for U.S. Overseas Development, 1933-1973," *Diplomatic History* 26 no. 3 (June 2011) 445-481; Jessica C.E. Gienow-Hecht, "Shame on U.S.? Academics, Cultural Transfer, and the Cold War: A Critical Review," *Diplomatic History* 24 no. 3 (July 2000): 465-494; Melvyn P. Leffler, *A Preponderance of Power: National Security, the Truman Administration, and the Cold War* (Stanford, CA: Stanford University Press, 1992); Ekbladh, *Great American Mission*.

commissioners to ensure the hemispheric road's continued local support, and promoted American road-building machines and techniques to Latin Americans. He memorialized these trips with scrapbooks. On one of the typical trips in the early 1920s, MacDonald and his delegation lobbied Latin American leaders; the scrapbook, for example, includes pictures of Adolfo Chiara, the President of Panama, receiving the American party and President Augusto Leguia of Peru meeting with MacDonald. The political nature of this project cannot be overstated: this was part of America's new foreign policy, building relationships through roads with foreign leaders. Indeed, the scrapbook ends outside the White House where President Calvin Coolidge welcomed the delegation back to the United States. International road engineers and leaders became state agents, representing American strategic goals and advocating for U.S. hemispheric leadership. Moreover, American foreign policy involved private enterprise, introducing businessmen to foreign leaders and relying on cooperative private-public endeavors.

Beyond highlighting the political nature of the enterprise, how MacDonald memorialized this early trip reveals his fundamental goal of modernization through roads. Throughout the scrapbook, MacDonald includes pictures of moments that capture local transportation and infrastructure networks. These are the times where he captures the undeveloped nature of Latin American society. With the caption "Transportation between Santiago and Los Andes," MacDonald's picture of a team of oxen pulling a wagon of agricultural goods showed the comparative backwardness of their transportation system. At another point on his trip, MacDonald snapped a photo of two children riding a donkey pulling a barrel. This, he claims in his note, is Chile's "Local water supply." Both these moments from his early 1920s trip reveal the lack of

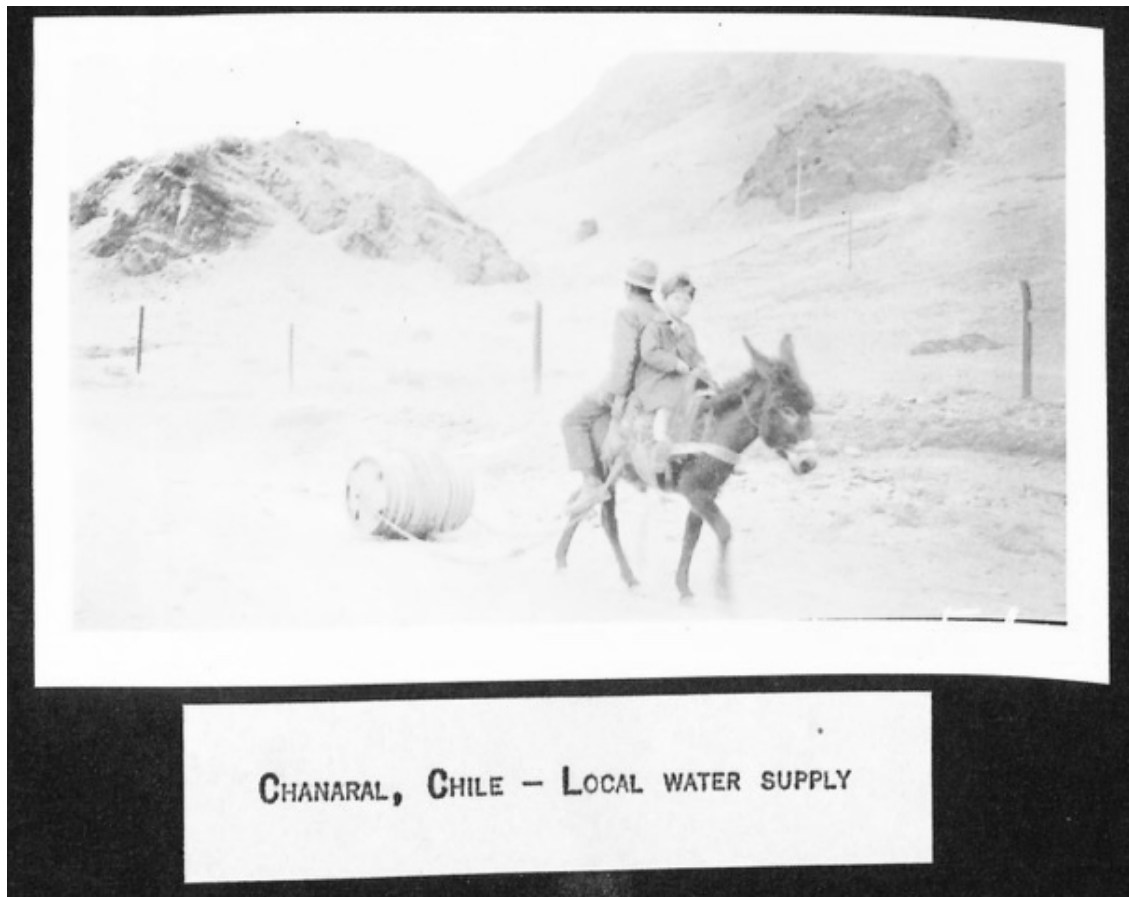


Figure 4.8: A page from Thomas MacDonald's scrapbook from his early 1920s trip through Latin America, showing how he perceived societies' backwardness without roads and automobiles. Courtesy of Cushing Memorial Library at Texas A & M.

modernity in Latin America, and MacDonald claimed this lack of modernity stemmed from a poor infrastructure system. This contrasts with American prosperity and consumerism of the 1920s and underscores how American progress and modernity served as the standard of global capitalistic and social excellence. American roads, he believed, would allow backwards Latin American peoples to modernize.

This perceived backwardness during the early 1920s, however, stands in stark contrast with images from MacDonald's later trips to Latin America. MacDonald, for instance, opens up a 1942 scrapbook with a triumphant picture of himself posing next to an American automobile on a concrete road. MacDonald's memorialization of this

latter trip revealed a celebratory narrative of American foreign utilitarian intervention, complete with images of the “Blue Brute” air compressor manufactured by the American Worthington company at a Latin American construction site, of a Chicago Pneumatic machine grading a road construction site, a Chevrolet vehicle on a Latin American road, and American highway engineers directing local laborers.⁷³ What changed between these two trips? Road infrastructure. Beginning in the 1920s, a coalition of American managerial elites and highway advocates led an international effort to erect a highway stretching throughout the hemisphere and crossing 19 countries. American machinery and ingenuity, MacDonald believed, spread American-style roads throughout the hemisphere. With this foreign highway project came the spread of American goods and ideals—cultural and economic.



Figure 4.9: Thomas MacDonald triumphantly posing in Panama in 1942 in front of an American-made trailer surrounded by American diplomats on a trip inspecting American road-building machinery and the project’s progress. Courtesy of Cushing Memorial Library at Texas A & M.

⁷³ Scrapbooks from MacDonald trip to Latin America: Box 5B, Folder 2; Box 5, Folder 5, Series 1: Personal, THM Collection, Cushing Library, TAM.

Chapter V: The Penal State's Convict Road Labor

“Put a dot on the map of the United States wherever you find forced labor and you will find the fair face of this country covered with a close-mottled rash.”
Walter Wilson, 1933¹

Labor practices reveal the complexity of progress, reform, and infrastructure in American state development. The laborers who built the nation's roads in the early twentieth century and the convict labor programs under which they toiled reveal the roots of the American penal state and the process by which power shifted from the individual states to a centralized federal system. Forced convict labor existed throughout the country's road building program, endorsed and executed at every governmental level, and the administrators and reformers involved justified it as legal and moral. Understanding the complexities of these convict labor arrangements is essential to a more holistic view of reform and power in early twentieth-century state-building.

How did American road developers and prison administrators force convicts to labor on the roads? The Thirteenth Amendment's criminal exemption clause holds the key. While the Thirteenth Amendment abolished hereditary, race-based chattel slavery, it codified a new form of national forced labor. “Neither slavery nor involuntary servitude,” the Thirteenth Amendment reads, “except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction.”² In 1871, the Courts clarified the state's power over convicts in a case that defined the Thirteenth Amendment for nearly a century. A

¹ Walter Wilson, *Forced Labor in the United States* (New York: International Publishers, 1933), 9.

² U.S. Const. amend. XIII, § 1. Rebecca McLennan traces the roots of the exemption clause in the Thirteenth Amendment to the Northwest Ordinance of 1787; Rebecca McLennan, *The Crisis of Imprisonment: Protest, Politics, and the Making of the American Penal State, 1776-1935* (Cambridge: Cambridge University Press, 2006), 31 and 85-86.

prisoner, the Court declared, “not only forfeited his liberty, but all his personal rights except those which the law in its humanity accords to him. He is for the time being a slave of the state.”³

In the early twentieth century, penal authorities invoked this criminal exemption clause to establish a state-run forced labor program that built the national road network and laid the foundation of the modern state. By examining how the penal state grew and developed at both the state and federal level through its restriction of rights and freedoms of certain individuals, highway infrastructure development must be seen in the context of a broader picture that includes labor exploitation and conscription on state-run infrastructural projects.⁴ Forced road labor fits a paradigm that dates back to Roman slaves and carries forward through infrastructure and road projects. This forced labor, unlike previous American exploitative canal and railroad labor, as well as the conscripted labor of sailors, soldiers, and slaves, came at the hands of the national government.⁵ Public penal authority accrued as individual states developed their own convict labor infrastructure programs at the beginning of the twentieth century.

³ *Ruffin v. Commonwealth*, 62 VA 790 (1871).

⁴ The forced and exploitative labor of disenfranchised in America parallels an historical trend of *corvée* labor, which, as Donald Worster explains, was “a drafted army in which unpaid laborers from the peasantry had to serve at the state’s demand.” This form of labor appeared most prominently in ancient feudal and monarchical societies. Quotation from: Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1992), 40. for a history of *corvée* labor on roads in France, see: Anne Conchon, *La Corvée des Grands Chemins au XVIII^e Siècle: Économie d’une Institution* (Rennes: Presses Universitaires de Rennes, 2016).

⁵ For an overview of how immigrants and classes of native-born Americans worked on the canals and railroads during the nineteenth century under harsh conditions and exploitative contracts, see: Ryan Dearing, *The Filth of Progress: Immigrants, Americans, and the Building of Canals and Railroads in the West* (Berkeley: University of California Press, 2016); for a history of unfree labor on the Chesapeake and Ohio Canal, see: Seth Rockman, *Scraping By: Wage Labor, Slavery, and Survival in Early Baltimore* (Baltimore, MD: The Johns Hopkins University Press, 2009); for a history of how workers and the union responded to industrialization that included severe conditions and economic dependency in a Colorado mine, see: Thomas G. Andrews, *Killing for Coal: America’s Deadliest Labor War* (Cambridge, MA: Harvard University Press, 2010).

Ultimately, and in parallel to the federal state's rise in other aspects of highway development, the national government usurped individual states as the leading penal authority, augmenting its highway power. In addition to showing how the states and nation became involved in defining and administering convict labor programs, the switch to publically administered penal labor also shows the way road and justice administrators used legal resources to accrue power and employ convicts: the federal government's restrictions of freedom contributed to the unfinished revolution of the Civil War.⁶

By studying convict labor as a national phenomenon central to any infrastructure project, we can simultaneously challenge regionalist paradigms and highlight national trends. Moreover, the convict road labor programs force scholars to assess the heroic legal monuments that are the Reconstruction Amendments with nuance in order to grasp the complexity of America's development. In Rebecca McLennan's study of imprisonment and the Reconstruction Amendments, she argues: "Congress demarcated the extent and limit of a fundamental freedom through reference to crime, convicts, and penalties for crime."⁷ Scholars have thoroughly detailed how the South's criminal justice system and convict labor system restricted rights of individuals: black codes,

⁶ Scholars perceive the Civil War as a process that continued into the twentieth century, recognizing a continuous ebb and flow of freedoms on changing political, economic, and social ideals. Convict labor represents another theatre of this unfinished revolution. For a history of the Greater Reconstruction period and the fight for civil rights and economic freedoms between the Civil War and the Gilded Age, see: Richard White, *The Republic For Which It Stands* (New York: Oxford University Press, 2017); for the way that the country privileged reunion and reconciliation over racial reckoning and equality, see: David W. Blight, *Race and Reunion: The Civil War in American Memory* (Cambridge, MA: The Belknap Press of Harvard University Press, 2001); for a comparative history of U.S. and Caribbean emancipation that shows the new relationship and continuous struggle between freedmen, the government, and white society, see: Eric Foner, *Nothing but Freedom: Emancipation and Its Legacy* (Baton Rouge, LA: LSU Press, 2007); for popular commentary on how the Civil War persists into the twentieth century, see: Tony Horowitz, *Confederates in the Attic: Dispatches from the Unfinished Civil War* (New York: Vintage Books, 1999).

⁷ McLennan, *The Crisis of Imprisonment*, 15.

vagrancy laws, convict leasing, and chain gangs.⁸ Although the South dominates the scholarly and popular consciousness, convict labor was no regional aberration.⁹ This chapter follows questions of labor and power that traverse the country as convict labor spread when states and municipalities used this disenfranchised class to build roads during the first decades of the twentieth century. Scholars of convict labor often see the shift to highway chain gangs and the use of the disenfranchised convicts, often African-American or Hispanic, in the trajectory of the unfinished Civil War. This chapter complicates the story by contrasting southern “guard labor” systems with Progressive Era “honor labor” and the belief that outdoor physical labor could Americanize both immigrants and Hispanic Americans.

Understanding who built the nation’s roads and how convict labor found its way into a broad range of road construction programs demonstrates how ideas and institutions spread and evolved. The differences in these convict labor programs shed

⁸ The historiography of southern convict labor is extensive, but the field’s foundational books include: Alex Lichtenstein, *Twice the Work of Free Labor: The Political Economy of Convict Labor in the New South* (New York: Verso, 1996); Mildred C. Fierce, *Slavery Revisited: Blacks and the Southern Convict Lease System, 1865-1933* (Brooklyn: Africana Studies Research Center, 1994); and Matthew J. Mancini, *One Dies, Get Another: Convict Leasing in the American South, 1866-1928* (Columbia, SC: University of South Carolina Press, 1996); Sarah Haley, *No Mercy Here: Gender, Punishment, and the Making of Jim Crow Modernity* (Chapel Hill: University of North Carolina Press, 2016); Dennis Childs, *Slaves of the State: Black Incarceration from the Chain Gang to the Penitentiary* (Minneapolis: University of Minnesota Press, 2015).

⁹ Criminal justice scholars outside the South have often overlooked convict servitude in their studies. However, Kelly Lytle-Hernández details the ways in which the city and county of Los Angeles, as well as the federal government, used convict labor in the West; see: *City of Inmates: Conquest, Rebellion, and the Rise of Human Caging in Los Angeles, 1771-1965* (Chapel Hill University of North Carolina Press, 2017). Rebecca McLennan focuses on convict labor in her broad study of the American penal system, yet her work focuses largely on the contractual labor system, as opposed to the public works: McLennan, *The Crisis of Imprisonment*. For broader overviews of penal history outside the South, see: Ethan Blue, *Doing Time in the Depression: Everyday Life in Texas and California Prisons* (New York: New York University Press, 2012); Shelley Bookspan, *A Germ of Goodness: The California State Prison System, 1851-1944* (Lincoln: University of Nebraska Press, 1991).

light onto how we conceive of regional peculiarities.¹⁰ First, although convict labor programs all rested on the same ideological and legal justification, differences manifested in labor oversight, compensation, and racial ideals. Second, convict labor promoters invoked Progressive Era reform rhetoric, casting this forced labor into a framework of social control and moral reform. These Progressive Era activists participated in a penal reform campaign through the 1910s and 1920s. Third, the increasing role and involvement of the national government in criminal justice reflects a growth in centralized federal power through its role as both an information broker and a regulator. Lastly, road construction illuminated tensions between free and convict labor, ultimately showcasing organized labor's influence. By the 1930s, the agitation of free laborers, paired with the Depression's consequences, forced the national government to regulate states' use of convict laborers.

States across the nation established state-run convict labor road programs in the context of the Good Roads Movement. Ultimately, with the growth of the federal highway bureaucracy, the federal government involved itself in every aspect of roads, including labor. Convict laborers answered the question of how states and the nation could economically build roads and occupy convicts' time. As the federal state accrued influence and power through the penal system and road construction, the national penal state planted its roots with contemporaneous impulses. Prohibition and its related criminal reforms in the first decades of the twentieth century, Lisa McGirr argues,

¹⁰ For historical regionalism, see: Edward L. Ayers, Patricia Nelson Limerick, Stephen Nissenbaum, and Peter S. Onuf, *All Over the Map: Rethinking American Regions* (Baltimore: The Johns Hopkins University Press, 1996).

“constituted the formative years of the federal penal state.”¹¹ The expansion to convict labor came in the context of the state accruing wide influence in the penal realm, both regulating recreational activity and surveilling citizens. In the 1910s and 1920s, crime became a national issue in which the federal state asserted itself. In 1914, Congress passed the Harrison Narcotics Act, one of the federal government’s first attempts to control private social behavior by regulating the production, importation, and distribution of cocaine, opium, and morphine. A few years later, states ratified the Eighteenth Amendment and Congress passed the Volstead Act, which outlined the enforcement of the national prohibition of alcohol. In 1924, the Bureau of Investigation (est. 1908) began building a centralized holding of criminal fingerprints. In the same year, the newly founded United States Border Patrol began policing citizenship along the southern border. As the state ramped up its penal regulation and enforcement, scientists and intellectuals studied the national issue and delivered recommendations. In 1925, President Calvin Coolidge convened the first National Crime Commission. President Herbert Hoover followed suit in 1929 by organizing the United States National Commission on Law and Observance and Enforcement.¹²

Throughout the early twentieth century, the wars on crime and drugs helped usher in a new model of consolidated state power based on law and order. Douglas A. Blackmon traces the roots of American convict labor to the “nascent industrial slavery that had begun to flourish in the last years before the Civil War.” Indeed, the use of

¹¹ Lisa McGirr, *The War on Alcohol: Prohibition and the Rise of the American State* (New York: W.W. Norton & Company, 2016), 221.

¹² For the broader history the criminal regulatory state in the 1920s, see: McGirr, *War on Alcohol*; for the history of citizenship laws and border policing, see: Kelly Lytle-Hernández, *Migra!: A History of the U.S. Border Patrol* (Berkeley: University of California Press, 2010).

convict labor on roads confirms Blackmon's economic argument for roots of the penal state: "the timing and scale of surges in arrests," he contends, "appeared more attuned to rises and dips in the need for cheap labor than any demonstrable acts of crime."¹³ As the calls for good roads intensified and the state needed a labor force, the government found its answer in the broad appeal of law and order and its consequences—an unfree body of laborers. As the national government began regulating and enforcing drugs and alcohol to stem crime, the penal state began to take shape.¹⁴

With regulation and enforcement came imprisonment. Punishment and reform contributed to the growth of state influence and control. This story follows the development of both individual states and the nation as a whole, with the national administration eventually usurping localized programs. America's highway program inspired new modes of crime and punishment. While new auto-related crimes, such as bootlegging and speeding, placed the authorities in contact with the public, incarceration reveals more about state development. How convicts worked on roads, where they worked, and how the state and public responded shows new forms of state control in this era. Convict labor practices and programs illuminate progress's dark underbelly. The reformers and government, however, used reform rhetoric and ideals to improve convicts' welfare, showing the dual-sided complexity of this labor system. The

¹³ Douglas A. Blackmon, *Slavery By Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II* (New York: Anchor Books, 2008), quotations on 7-8.

¹⁴ For the transition from slavery to the Southern penal system, including convict leasing and criminal justice as a means to reify white supremacy and control blacks, see: David M. Oshinsky, "*Worse Than Slavery*": *Parchman Farm and the Ordeal of Jim Crow Justice* (New York: Simon & Schuster, 1996); For a history of mass incarceration focused on the Texas penal system and how the American penal system is based on an economic profit imperative and as a reaction against civil rights, see: Robert Perkinson, *Texas Tough: The Rise of America's Prison Empire* (New York: Metropolitan Books, 2010); For a history of mass incarceration as a continuation of racial oppression and control in a post-slavery America, see: Michelle Alexander, *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* (New York: The New Press, 2010).

Progressive Era reformers and good roads advocates linked the Good Roads Movement and criminal punishment. The federal government encouraged state-run forced labor programs by propagating a moral justification, guiding local state administration and laws, and establishing its own convict labor camps. As states needed road laborers, they saw convicts as the natural answer, and as they needed information or models, they turned to the federal government to answer their queries and guide the programs.

In 1914, Sidney Wilmot, with a freshly minted master's degree from Columbia University's Department of Highway Engineering, lectured on how states in the North used convicts on roads, and he unequivocally declared: "Convicts are the property of the state to be used as the state in its own wisdom and sovereign authority sees fit. This is sanctioned by the constitution—legalized slavery."¹⁵ Beyond the Thirteenth Amendment's sanctioning, proponents of convict road labor offered two arguments: convict reform and economic benefit. Convict road labor was one way the post-Civil War Constitutional Reconstruction Amendments codified limitations of freedom and extended state influence.

State-Run Convict Labor Programs

Convict labor systems differed throughout the country. These models took shape in the first decades of the twentieth century, initially at the state and local levels. This state-run model contrasted with convict labor in the nineteenth century in which "the practice of selling the labor of convicts to private enterprise gradually became widely

¹⁵ Sydney Wilmot, "Use of Convict Labor for Highway Construction in the North at the Proceedings of the Academy of Political Science in the City of New York," *Good Roads and Convict Labor* 4, no. 2 (Jan. 1914): 6-68.

and deeply entrenched in penal ideology.”¹⁶ Although we can proffer regional geographic generalizations based on these new state-run programs, the historical record challenges the usefulness and accuracy of any geographic paradigm. Program variations manifested in law, administration, oversight, and labor. With road work, states everywhere directly controlled convicts’ time and bodies, despite how programs differed. Comparing program models is important to understand complex and varied penal ideologies.

Convict labor existed prior to the road labor system of the early twentieth century. Following the Civil War, convict labor boomed. Between the war and the early 1890s, “the contract prison labor system had colonized and conditioned every sphere of prison life ... heavily conditioned by the imperatives of the large-scale, industrial contract system.”¹⁷ Although municipalities and states had departments or bureaus that oversaw the administration of criminal justice, they often relied on private enterprise and authority. Generally, states leased convicts through contracts or bids to enterprises that oversaw convicts’ room and board, daily work regimen, and health and safety. As Alex Lichtenstein explains: “Rather than house convicts in a penitentiary, after 1865 southern states leased them to the highest bidder, who was then responsible for feeding, clothing, and restraining the convicts.”¹⁸ Southern and Northern convicts often toiled in mines and factories, respectively, under dangerous conditions. As the early Progressive Era dawned, the contract system faced objections from two factions. Organized labor dissented on the grounds that they could not compete economically with the convict

¹⁶ McLennan, *Crisis of Imprisonment*, 54.

¹⁷ *Ibid.*, 191.

¹⁸ For more on the Southern convict labor system, see: Lichtenstein, *Twice the Work of Free Labor*, 2-5

laborers for mine and factory jobs. Penologists and moral reformers also objected, arguing that it neither reformed prisoners nor deterred crime. In the late 1890s, the contract and lease labor systems collapsed and states faced a crisis in trying to concoct a new form of control and punishment that was legal, had the power to reform convicts, and economically sustainable as a publically administered program. McLennan argues: “Reformers and administrators contrive[d] a constitutionally viable, labor-based disciplinary order for the prisons ... and foster[ed] the articulation of a new, self-consciously progressive penology.”¹⁹

With the collapse of the contract labor system, the state found opportunity. As it re-defined what form punishment and reform would take, the state turned to public works. States re-claimed control over convicts’ time and labor by turning to government-run convict labor programs. Indeed, this shift first occurred at the state level with road construction. In the 1910s, though, the federal government became involved in road building. At that point, power over penal administration and control began to shift towards the national state. The shift in power from state to national control parallels the shift in general control of the road building process. States, then, first established convict labor programs with their road departments.

In the 1910s, the United States Department of Agriculture undertook a national study of convict road labor.²⁰ Various governmental bureaus and departments had studied convict labor since the 1880s, but this 1910 study was the first to focus on roads and road labor, and therefore served as the first investigation into state-administered

¹⁹McLennan, *Crisis of Imprisonment*, 192.

²⁰ For the final report from this study: J.E. Pennybacker, H.S. Fairbanks, and W.F. Draper, “Convict Labor for Road Work,” *United States Department of Agriculture Bulletin No. 414*. (Washington: Government Printing Office, 1916).

forced labor. As all but four states used convict labor on roads in some form by 1913, the authors noted the tremendous differences they encountered.²¹ The USDA, which housed the Office of Public Roads, employed a system to categorize the different convict labor models, and they sought to address local concerns about program inefficiencies. According to the investigators, convict labor took six general forms: The Lease System; The Contract System; The Piece-Price System; The Public-Account System; The State-Use System; and The Public Works and Ways System.²² Although these six categories remained constant throughout the Gilded Age and Progressive Era, the proportion of employed convicts in each changed: after the public dissented to the lease, contract, and piece-price systems in the late 1890s, the states turned to the programs that civil servants administered and from which the public benefitted. By 1923, nearly 20 percent of all convicts held in the United States—at the national and state level—engaged in labor under the Public Works and Ways System.²³

Nearly all road laborers toiled under the Public Works and Ways System. As states formulated their programs for convict road labor, variations appeared. The USDA analyzed its 1916 data, showcasing 17 states using the guard system, 14 using the honor system, and 4 using a combination of the two. Contrasting the benefits and drawbacks of the honor and guard systems, the authors noted the “noticeable limitations and advantages” of each. The USDA highlighted how administrators could best implement

²¹ Connecticut, Kentucky, Rhode Island, and South Dakota had no convicts working on the roads in 1913; see: State Aid Chart prepared by the Office of Public Roads in June 1913, “Tables – Data RE Highway Systems of Nations of the World 1913” Folder, 30/530/21/23/5/Box 98, “Bureau of Public Roads Classified Central File 1912-1950” Series, Record Group 30, National Archives and Record Administration, College Park, MD (hereafter: BPR Series, RG 30, NARA-II).

²² United States Bureau of Labor Statistics, “CONVICT LABOR FOR ROAD WORK,” *Monthly Review of the U.S. Bureau of Labor Statistics* 4, no. 4 (April 1917): 591-592.

²³ “Convict Labor in 1923,” *Bulletin of the U.S. Bureau of Labor Statistics* 372 (January 1925), 3.

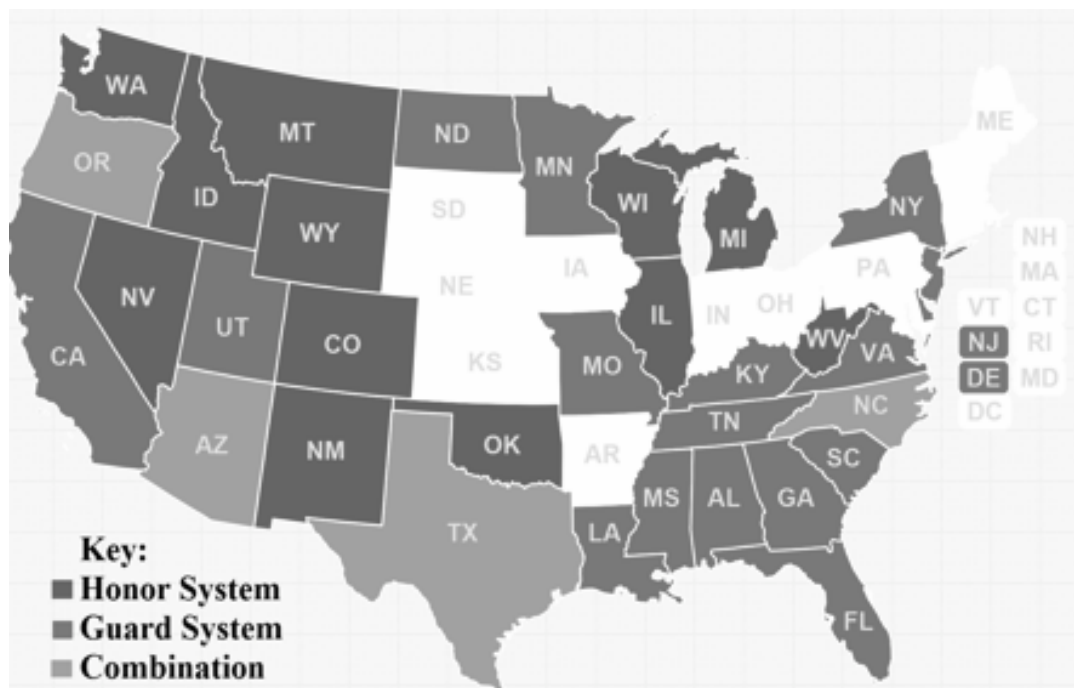


Figure 5.1: This figure shows the geographic variation of the honor and guard system in the US in 1916. Although the honor system dominated the West and the guard system dominated the South, the great variation in the southwest, Pacific coast, and North defies such geographic paradigms. Data from: J.E. Pennybacker, H.S. Fairbanks, and W.F. Draper, "Convict Labor for Road Work," *United States Department of Agriculture Bulletin No. 414*. (Washington: Government Printing Office, 1916). Map by author.

components of select programs to build an ideal convict labor system. The USDA bulletin also included an appendix comprised of local and state statutes that governed convict labor, showing local variations and adoptable model legislation. The study shows the nationwide shift to state-run convict labor road programs.

The guard system included stricter regulation and discipline of convicts. In this system, convicts labored under the constant watch of armed guards, and the laborers generally wore distinctive striped uniforms. Prisoners often remained shackled with leg chains, and although Sunday meant a work break, the "general practice [was] to keep them 'on the chain' or in their cages on Sundays and holidays." With the exception of a few states, guard system convicts lived in cages. Lastly, in guard system prisons and camps, the entire able-bodied convict population worked. In contrast, the honor system

differentiated itself primarily by the fact that armed guards did not oversee and patrol the convicts. Under the honor system, “the uniform of the men [was] not particularly distinctive, there [was] no whipping, no chaining, no employment of bloodhounds.” This system relied on trustworthy convicts, so prison administrators selected specific laborers. Honor programs also differentiated themselves by compensating the convicts—financially and/or in a reduction of the prisoners’ sentence.²⁴

The honor system originated in the West, unlike the guard system which sprang from the South. Colorado, Montana, New Mexico (as a territory), and Oregon all vie for the title of first honor program circa 1911-12, yet Colorado deserves credit for developing and propagating a model system on the national stage. Between 1911 and 1913, Colorado’s Warden Thomas J. Tynan perfected the “honor system” into the “Colorado system,” and he astounded his colleagues across the country with the data he presented. Promoting this model, Tynan declared: “This system has revolutionized penology and has demonstrated that through it the greatest good from financial, commercial and industrial vantage points can be gained for the community, as well as for the reformation and reclamation of the criminal element.”²⁵ Tynan wrote and lectured on how he rewarded good convicts with the opportunity to work, how those convicts worked hard and did not attempt escape, and how the public benefited from the good roads built in the state. Without abusive and overpowering state guard, the honor system attempted to reform and empower convict for their eventual return to society.

²⁴ Of the guard systems, New Jersey, New York, Oregon, Arizona, and Utah discontinued the use of identifiable striped clothing; Virginia forced convicts to wear brown. For a detailed overview of the guard system (“the chain gang”) using Georgia’s penal system as the object of study, see: Lichtenstein, *Twice the Work of Free Labor*, 152-185. *United States Department of Agriculture Bulletin No. 414*, 52-60.

²⁵ Thomas J. Tynan, “Prison Labor on Public Roads,” *The Annals of the American Academy of Political and Social Science* 46 (March 1913): 58.

Summarizing Tynan's accomplishments through 1915, one supporter wrote: "If there is any man in Colorado who occupies a national position, and who has done splendid things to attract favorable attention to Colorado, it is Tynan, not only because of the original and remarkable social experiment he is working out, but through his economical building of such excellent roads."²⁶ While catalyzing penal reform, Tynan maintained a belief in the necessity of good roads and engineering. His adherence to effective highway development practices ultimately (after his penal career ended) led to Denver's mayor appointing him as a city street inspector then Colorado's governor appointing him as an inspector in the State Highway Department.²⁷ He coupled road building and incarceration, taking his model national and spurring a penal movement.

Tynan traversed the nation giving speeches on convict labor and roads with his "two thousand feet of motion picture film and two hundred colored slides, illustrating the work that is now being done by our prisoners."²⁸ As Tynan relentlessly boosted the Colorado system, other states adopted the template. In Michigan, for example, Governor Chase S. Osborn declared "The Colorado honor system seems to be especially good," urging his legislature to follow Colorado's lead.²⁹ The Michigan State Board of Agriculture published a study of honor labor programs in 1915, supporting Osborn's

²⁶ Correspondence from James H. Causey to Governor George A. Carlson, May 27, 1915, Box #1 (13609) Colorado State Penitentiary Thomas J. Tynan, Warden, Administrative and Correspondence, Department of Corrections, Colorado State Archives (hereafter: DOC, CSA).

²⁷ "Thos. J. Tynan Named Inspector in State Highway Department," *Denver Post*, Nov. 24, 1935.

²⁸ Prior to his job as a Warden, Tynan was a traveling salesman for a Denver mercantile company, where he learned effective salesmanship techniques. For one of the speeches he gave on his convict labor system, see: Ozark Trails Association National Meeting Information, April 7, 1915, Box #1 (13609) Colorado State Penitentiary Thomas J. Tynan, Warden, Administrative and Correspondence, DOC, CSA.

²⁹ Prison Labor in the Governors' Messages, Number Three (pp. 16), Folder 1, Box 1, Collection 5966: National Committee on Prisons and Prison Labor Pamphlets and Leaflets, Kheel Center for Labor-Management Documentation and Archives, M.P. Catherwood Library, Cornell University (hereafter: Collection 5966, Kheel Center, Cornell).



Figure 5.2: Warden Thomas J. Tynan of the Colorado Department of Corrections. He transformed the “honor system” into the “Colorado system,” while nationally promoting the model. He gained supporters, and spurred a penological revolution that connected Progressive reform, highway development, and imprisonment. Warden Thomas J. Tynan 1909-1927, X-17944, Denver Public Library Digital Collections.

original hypothesis. The study included data from New York, Montana, Minnesota, Wyoming, Arizona, and Colorado, and the authors concluded: “in every state where the ‘honor system’ has been in use ... success has been the general verdict.”³⁰ Governor Osborn got his wish. Beyond showcasing his success as a model to Michigan, Tynan helped states replicate his program—both legally and administratively. California, for instance, “adopted a duplicate of the Colorado law.” With this law and the fact that the

³⁰ State Board of Agriculture, *State Farmers’ Institutes Season of 1914-15, Institute Bulletin No. 21* (Agricultural College, MI: State Board of Agriculture, 1915), 258-259.

state would “put a great many men on the roads,” Warden Tynan helped his friend, former employee, and like-minded penologist George Asher secure a job replicating the Colorado system in California.³¹ When the Penitentiary Commission of Illinois opened a new penitentiary in 1915, their attorney complimented Tynan, for Illinois modeled their new penitentiary on the Colorado system. “I wish to assure you,” the attorney wrote to Tynan, “of my admiration of the work you are doing in assisting the unfortunates to again become useful citizens rather than to continue as menacing burdens of society.”³² Tynan’s persistent self-promotion succeeded: states across the nation adopted his template.

The Colorado system even won converts from reform-minded politicians in states that employed the guard system. Governor Benjamin W. Hooper of Tennessee, for example, found the conditions of his state’s chain gangs contrary to his Progressive ideals, opining: “Confining fifteen or twenty men in a cage on wheels, with but little ventilation and sanitation, as has been done in several counties is brutal. I also doubt whether the working of men in stripes and chains before the public gaze is wholesome either for the men or the public.” Considering the appalling conditions of the chain gang, Hooper undertook a comparative investigation of convict road labor with a national scope. “In Colorado,” he found, “state convicts are worked on the public highways on the honor system. This plan has been successful.” Hooper lobbied, albeit unsuccessfully,

³¹ Asher worked for five years under Tynan in the Colorado Department of Corrections, and Tynan lobbied on Asher’s behalf to secure a position with the California D.O.C. Correspondences between Thomas J. Tynan and George Asher, April 1915, Box #1 (13609) Colorado State Penitentiary Thomas J. Tynan, Warden, Administrative and Correspondence, DOC, CSA.

³² Correspondence from Edward Corlett to Thomas Tynan, Aug. 24, 1915, Box #2 (13610) Colorado State Penitentiary Thomas J. Tynan, Warden, Administrative and Correspondence, DOC, CSA.

for his state's legislature to adopt the Colorado system.³³ Tynan advertised his model, and he held that the Colorado system elicited twofold positive results: first, the system produced much-needed roads inexpensively; and second, the system helped convicts develop both morally and physically. Although New Jersey used a hybrid honor-guard system, the state's governor in 1915 promoted it as an honor system based on the Colorado model. When describing the system, Governor James Fairman Fielder echoed the reform and public good rhetoric: "I am opposed to confinement of prisoners in idleness within stone walls and behind bars, they must not brood over their unfortunate past and speculate as to the uncertainty of their future. I favor the use of prison labor in the construction and maintenance of public highways, it gives the prisoner the necessary bodily labor in the open and good conduct men can be chosen as a reward to them and an incentive to their fellows and the value of honor demonstrated."³⁴ Not only did Fielder tie together reform, roads, and health ideology, but the statement itself serves as testament to Tynan's successful boosterism.

Though Tynan's ideas found a receptive audience across the nation, the differences between the honor and guard systems were stark. Warden Tynan, for instance, distanced the Colorado system from the Southern system "where," as he put it, "men are sold at auction to the highest bidder."³⁵ This trope represents a greater struggle amongst the honor system states: they attempted to distance their program from the guard system—a guard system that seemed to be another iteration of chattel slavery.

³³ Prison Labor in the Governors' Messages 1912-1913, Number Eight (pp. 74), Folder 1, Box 1, Collection 5966, Kheel Center, Cornell.

³⁴ Quoted in: State Board of Agriculture, *State Farmers' Institutes Season of 1914-15, Institute Bulletin No. 21* (Agricultural College, MI: State Board of Agriculture, 1915), 259.

³⁵ Thomas J. Tynan, "Prison Labor on Public Roads," *The Annals of the American Academy of Political and Social Science* 46 (March 1913): 58.

Unlike under the chain-and-guard “slave” system, men in Colorado “worked with an energy and a zeal that has never before been equaled ... because they felt they were working for themselves.”³⁶ Morally distancing themselves, honor system supporters evoked conscious ideals of competitive regionalism as measured by “progress.” Edward Ayers and Peter Onuf write, “the development of regional consciousness was predicated on awareness of *other* regions in a competitive political context.”³⁷ The discourse of political and social competition manifested in how honor system boosters distanced their program. Although they highlighted the differences, honor system administrators still relied, just as the guard system programs did, on the Thirteenth Amendment’s criminal exemption clause. Both systems had the same goal with parallel methods: build good roads inexpensively with a disenfranchised class’ labor. Regardless of the operation, the state controlled convict labor programs.

By the mid-1910s, nearly every state had established a state-run forced labor program. The honor and guard systems differ from late nineteenth-century convict programs because public administrators now ran the programs; in the earlier models, states abrogated responsibility. Penologists, administrators, and reformers participated in a national discourse that allowed states everywhere to inaugurate state-run forced labor. New models spread across the map with the call for roads, and states adapted these systems to fit local needs. While Utah and some parts of Arizona, for instance, functioned more effectively with the typically-Southern guard system, West Virginia and parts of North Carolina employed honor system ideals and administration. Although New York and New Jersey used armed guards to oversee the convicts, their programs

³⁶ Ibid., 58-59.

³⁷ Ayers, et. al, *All Over the Map*, 8.

functioned more as a hybrid, offering incentives to work, non-distinctive clothing, and more freedom. Regional models do not hold up under historical scrutiny, challenging how scholars see the nation and its local political and cultural variations. Other than the physical national linkage of the highways themselves, states were united in the shift to publically-administered convict labor.

Progressive Era Reform and Racial Discourse

While the administration of convict labor programs differed across the country, convict labor supporters all proffered similar legal and moral justification. Convict labor proponents offered three main arguments: first, roads needed to be built and convict labor provided an economically viable means of accomplishing the task; second, prisoners needed to be occupied, and earlier factory and mining convict jobs had been abolished; third, hard labor reformed prisoners, teaching the skills and work ethic to integrate back into society. While this reform impulse applied everywhere, local demographics determined the way reformers re-conceptualized racial ideas, citizenship, and manhood. Progressive reformers played a significant political and social role in the development of the new penal state. These reformers rose to prominence in the 1910s and found their ideas accepted into policy through the 1920s. During the long Progressive Era, many reformers who fought for different convict road labor models also engaged in contemporaneous reforms. This multi-faceted Progressive fight for reform invited the federal government into a role that included recreational and social oversight and control, thereby allowing the government to expand its purview. During the Progressive Era, moral reform discourse circulated widely, and its moral backing

provided the justification for the state to accrue wide influence and power, including in the realm of convict labor programs.³⁸

While most Progressive reformers rallied around the honor system in particular, they still lauded the moral and physical aspects of both the honor and guard systems. McLennan argues that since the Revolution, “forced, hard, productive labor was of foundational importance to the penal order.”³⁹ Although the way the state (or its partner businesses) implemented labor programs changed, the underlying belief in labor as an effective reform mechanism persisted. Because they believed hard labor reformed, Progressives cast convict labor into a broader framework of moral reform and social control mechanisms. Joseph Hyde Pratt, a road advocate, reformer, and penologist from North Carolina, remarked that chain gangs “improved [convicts’] general character and prepared them for better citizenship.”⁴⁰ Both honor and guard system literature noted the positive influence of outdoor work on the convict’s soul: “Hard manual labor, in close touch with nature and its fresh air and sunshine, is universally recognized as most beneficial.”⁴¹ Under this lens, reformers portrayed convict road work as a tool to reform.

³⁸ For the social control component of Progressive reformers who sought to restore a traditional life through order imposed on society by Progressives, see: Robert H. Wiebe, *The Search for Order, 1877-1920* (New York: Hill and Wang, 1967); for the way the social control manifested in creating a new urban system with regimented recreational activities and ideas on cleanliness, see: Paul Boyer, *Urban Masses and Moral Order in America, 1820-1920* (Cambridge: Harvard University Press, 1978); for a broad view of the motivations behind Progressive era reforms and how their impulse to shape society based on their prejudices and notions manifested, see: Michael McGerr, *A Fierce Discontent: The Rise and Fall of the Progressive Movement in America, 1870-1920* (New York: Free Press, 2003); for the way that Progressive reforms attempted to restore order in the context of class conflict through social, political, and labor regulations, see: Shelton Stromquist, *Re-inventing “The People”: The Progressive Movement, the Class Problem, and the Origins of Modern Liberalism* (Urbana: University of Illinois Press, 2006).

³⁹ McLennan, *Crisis of Imprisonment*, 53.

⁴⁰ Quoted in: Tammy Ingram, *The Dixie Highway: Road Building and the Making of the Modern South, 1900-1930* (Chapel Hill: The University of North Carolina Press, 2014), 136.

⁴¹ J.E. Pennybacker, H.S. Fairbanks, and W.F. Draper, “Convict Labor for Road Work,” *United States Department of Agriculture Bulletin No. 414*. (Washington: Government Printing Office, 1916), 11.

“The advanced penologist,” one warden noted, knows “that the purpose of imprisonment is not to punish but to reform.”⁴²

While transitioning from contract labor systems, penologists of the new system maintained the belief that it was “most inhuman to condemn these men,” as the governor of one honor system state put it, “to idleness and to thus deprive them of the God-given blessing of useful occupation.”⁴³ Many contemporaneous prisons—if lacking road programs—worked convicts on farms within prison grounds.⁴⁴ These penal farms instilled a good work ethic and benefited the prison’s budget. In addition to promoting a good work ethic and physical labor, Progressive reformers believed that productive outdoor labor would restore a prisoner’s dignity, offering him a chance to regain manhood and citizenship. As one reformer declared: “every opportunity should be taken by the state to give the convict every chance possible to make a man of himself.”⁴⁵ These convicts, penologists argued, morally benefitted from their service to society. Explaining the Colorado system to a Connecticut warden, Tynan explained: “I have never felt that you could build up a man’s morals or his character without first building him up physically, and teaching him how to do the practical things in life ... and my

⁴² Report of Convict Labor Conditions in Colorado, “Convict Labor—CO” Folder, 530/21/23/7/Box 112, BPR Series, RG 30, NARA-II.

⁴³ Prison Labor in the Governors’ Messages, Number Three (pp. 19), Folder 1, Box 1, Collection 5966, Kheel Center, Cornell.

⁴⁴ For theory on the belief in the positive good of outdoor manual labor for convicts, see contemporaneous manuals and tracts on prison labor, such as: Charles Richmond Henderson, *Outdoor Labor for Convicts, a Report to the Governor of Illinois* (Chicago: The University of Chicago Press, 1907); Federick Howard Wines, *Punishment and Reformation, a Study of the Penitentiary System* (New York: Thomas Y. Crowell Company Publishers, 1919); Louis Newton Robinson, *Penology in the United States* (Philadelphia: The John C. Winston Company, 1922).

⁴⁵ Joseph Hyde Pratt, “Convict Labor in Highway Construction,” *The Annals of the American Academy of Political and Social Science* 46 (Mar. 1913), 79.

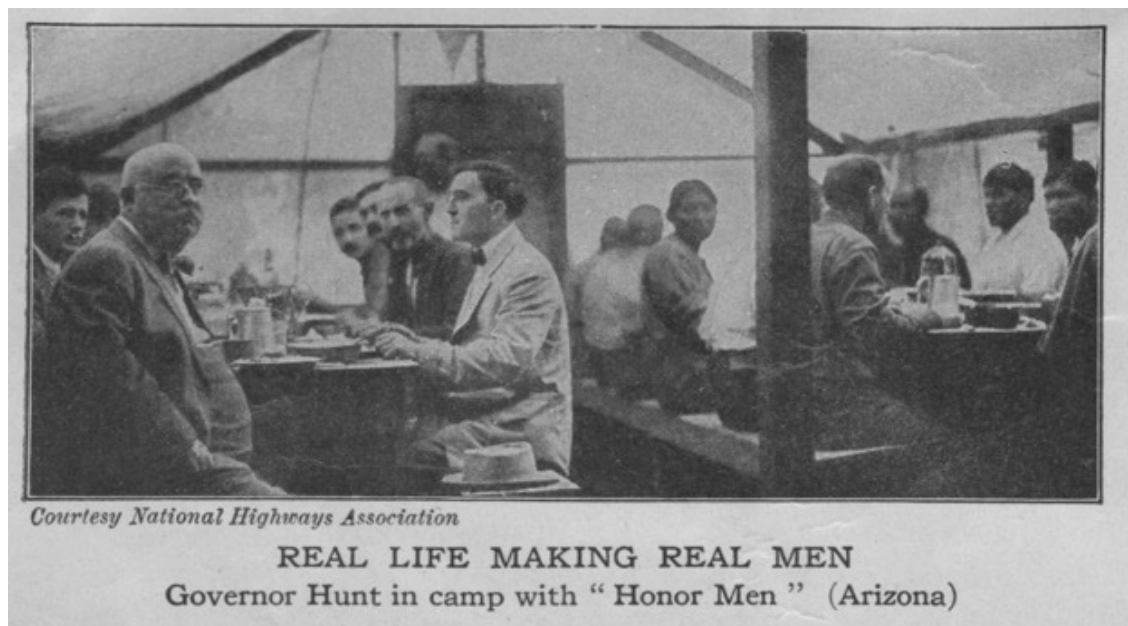


Figure 5.3: Appearing the pamphlet "Honor Men and Good Roads Everywhere," this image shows the allegedly civilizing and reforming nature of honor guard camps in the West. The Governor of Arizona visited this integrated penal honor camp. Source: Kheel Center for Labor-Management Documentation and Archives, M.P. Catherwood Library, Cornell University

idea of out-door work for prisoners in both road construction and farm work is to bring as many back to the soil as possible."⁴⁶ The shift to outdoor state-run labor came in the context of a Progressive Era social control ideas founded on prescribed outdoor time, physical activity, and diet.

The state's new reliance on outdoor manual labor codified new ideas on health and welfare in this period. Contemporaneous with the prison reform, scientists and reformers proffered new ideas on physical and mental wellness that comprised the "Clean Living Movement" and included recreational education and nutritional science. This health impulse shifted influence onto expert scientists, who were responsible for defining diet and exercise. Inmates, without the opportunity to dissent, were thrust into the state's new health regime. While the Clean Living Movement of the early twentieth

⁴⁶ Correspondence from Warden TJJ to Mr. A.W. Weil, July 6, 1915, Box #1 (13609) Colorado State Penitentiary Thomas J. Tynan, Warden, Administrative and Correspondence, DOC, CSA.

century began as a grassroots movement intimately related to contemporaneous temperance, eugenics, religion, and women's rights reform movements, the state implemented ideas on recreation and nutrition amongst its captive population. Indeed, this movement focused on and resulted in "legislative limitation of individual choice regarding personal health behavior."⁴⁷ Penal reformers participated in a broader discourse of Progressive reforms that included ways to control and improve the body and health, and penal administrators enacted these reforms and entered the intimate domain of corporal health.

Beyond the health of convict road laborers, Progressives hailed the benefits of convict labor conferred to their families. Ensuring male convicts continued to support their families as breadwinners represents another way to realize manhood and citizenship as a convict. These reformers fought to compensate prisoners for their labor through the early 1910s. The question of whether or not states should pay convict laborers got at "one of the most complex and complicated problems in the realm of penological science": does a prisoner forfeit his industrial status as a wage-earner?⁴⁸ Some states compensated convicts for their forced labor. The National Committee on Prison Labor (NCPL), an influential prison reform coalition based in New York with adherents throughout the nation, advocated for convict laborers to receive compensation

⁴⁷ Quotation from: Ruth C. Engs, "Resurgence of a New 'Clean Living' Movement in the United States," *Journal of School Health* 61 no. 4 (April 1991): 155-159. For an overview of health reform movements in American history including the Progressive Era Clean Living Movement, see: Ruth Clifford Engs, *Clean Living Movements: American Cycles of Health Reform* (Westport, CT: Praeger Publishers, 2000). On the health science of food in the Progressive era, see: Camille Bégin, *Taste of the Nation: The New Deal Search for America's Food* (Urbana: University of Illinois Press, 2016), 48-49; for a discussion of general Progressive Era reform rhetoric and goals, along with a connection between two well-known movements (eugenics and prohibition) and hygiene and welfare of the body, see: David M. Wrobel, *America's West: A History, 1890-1950* (Cambridge: Cambridge University Press, 2017), 59-73.

⁴⁸ F. Emory Lyon, Packet 18 (pp. 4), Folder 1, Box 1, Collection 5966, Kheel Center, Cornell.

for all work. Dr. E. Stagg Whitin, who led the NCPL, wrote: “The payment of a wage to the convict ... tends to destroy the state of slavery.” In equating unpaid convict labor to slavery, Whitin found a receptive audience among some reformers. One such organization reprinted Whitin’s prison reform diatribe and undertook a “new abolition movement” against “convict slavery.”⁴⁹ Compensated convict laborers could support their families, further ameliorating the state’s financial burden and instilling dignity in the individual and his family.

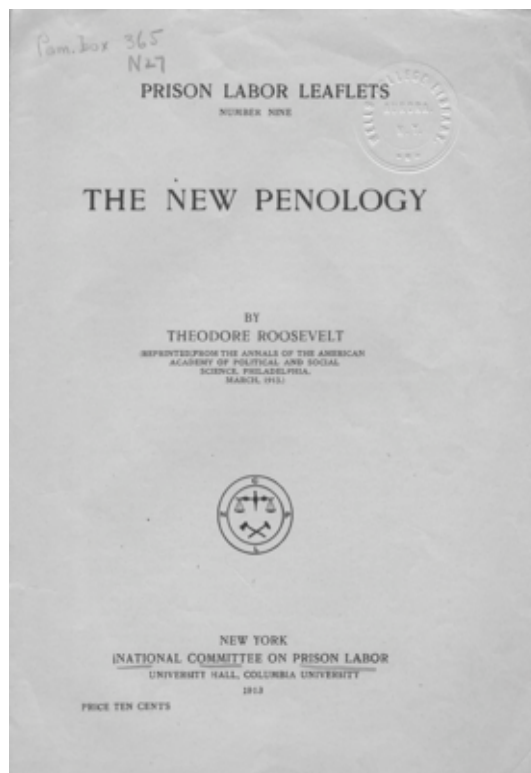
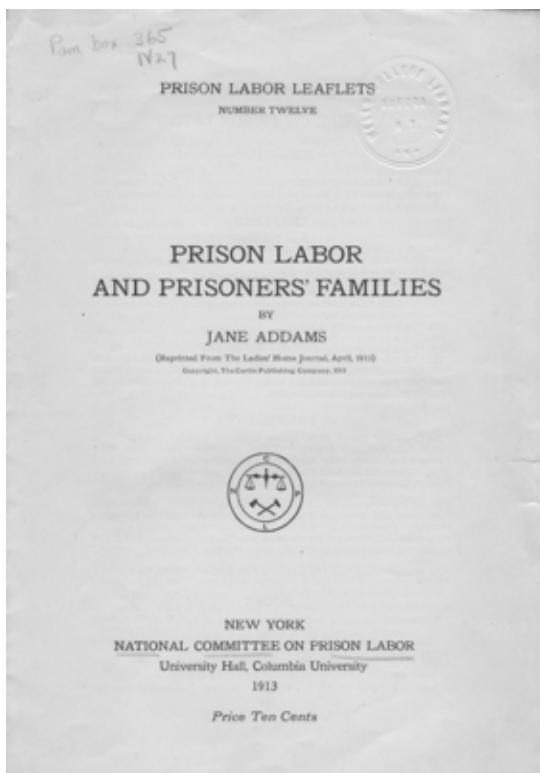
Robert S. Vessey, governor of South Dakota, informed his constituents: “If the prisoner is allowed to work and is earning money, a portion of his earnings should surely be employed to assist his needy family and as much as possible relieve their suffering.”⁵⁰ Although the daily rate paled in comparison to free laborer rates for the same work, the payment benefited convicts, convicts’ families, and the quality of work. Whether convicts worked for some pay or without any compensation, their labor saved the state money that would otherwise be paid to free and/or organized laborers. After Arizona received statehood, for example, the governor advocated for a paid convict road program. To receive an appropriation in the new state’s budget for convicts at the rate of 25 cents per day, Governor George Hunt told the legislature: “The cost will be small compared to the actual benefits to be derived from the construction of splendid highways, while the benefits accruing to society will, I am convinced, return the investment a thousand fold.”⁵¹ Following the model Warden Tynan instituted in

⁴⁹ Whitin and the American Unitarian Association quoted in: McLennan, *The Crisis of Imprisonment*, 325-326.

⁵⁰ Prison Labor in the Governors’ Messages, Number Three (pp. 19), Folder 1, Box 1, Collection 5966, Kheel Center, Cornell.

⁵¹ Prison Labor in the Governors’ Messages 1912-1913, Number Eight (pp. 10), Folder 1, Box 1, Collection 5966, Kheel Center, Cornell.

Colorado, Arizona, like many other states, began to pay their convict laborers. Many governors and local politicians sought to control the prisoners' income by mandating that they send a portion to their family, codifying the progressives' supportive intensions. This idea gained national traction. Theodore Roosevelt's Progressive Party adopted a plank in its party platform mandating "the application of prisoners' earnings to the support of their dependent families."⁵² Even Jane Addams saw the benefit of compensating laborers to support families; she penned a full-length pamphlet, "Prison Labor and Prisoners' Families."⁵³ The policy of mandating convicts continue to support



Figures 5.4 and 5.5: Written for and published by the National Committee on Prison Labor, these pamphlets argue for a new form of penal authority, premised on the reforming nature of outdoor labor, family support, and productive manhood. The two authors, Jane Addams and Theodore Roosevelt, demonstrate how top Progressive reformers promoted the new model of penology. Source: Kheel Center for Labor-Management Documentation and Archives, M.P. Catherwood Library, Cornell University.

⁵² Progressive National Committee, *A Contract With the People: Platform of the Progressive Party Adopted at its First National Convention* (New York City: Progressive National Committee, 1912).

⁵³ "Prison Labor and Prisoner's Families" by Jane Addams, Folder 1, Box 1, Collection 5966, Kheel Center, Cornell.

their family reinforced the heteronormative American family. By regulating income usage, the state codified the ideal family structure supported and led by the male breadwinner.⁵⁴

While Progressives touted financial compensation's benefits, they also extolled the virtues of the good-time compensation. In many programs, wardens offered a reduction in sentences for time worked on the roads. The USDA found that most wardens reduced a convict's prison sentence by five to ten days for each month worked.⁵⁵ This further incentivized reform, manifesting tangibly in both good work and honorable behavior. Time compensation laid bare the reformers' underlying belief: a prisoner could reform in prison and rejoin society as a productive citizen. "The greatest good," Warden Tynan argued, "comes to the men themselves."⁵⁶ By advocating a reduced sentence, penologists affirmed their belief that they could mold individuals for societal good.

National reformers propagated a model of an ideal citizen: a male breadwinner who supported his family and participated in physical, reforming outdoor labor. This model transcended program models and geographic variations, finding reception in both honor and guard system road programs. In a national comparison, differences appeared in regional and local discourses concerning race and citizenship. Scholars note how the

⁵⁴ Growing during the Greater Reconstruction period, the government incentivized lifeways structured around a male breadwinner. This ideal circulated again in government programs and narratives during the New Deal era. For ideas of home and the ideal family during Reconstruction, see: White, *Republic For Which It Stands*, 141-148. For the government narratives of an ideal family life in the New Deal, see: Holly Allen, *Forgotten Men and Fallen Women: The Cultural Politics of New Deal Narratives* (Ithaca: Cornell University Press, 2015), 13-21, 28-35.

⁵⁵ J.E. Pennybacker, H.S. Fairbanks, and W.F. Draper, "Convict Labor for Road Work," *United States Department of Agriculture Bulletin No. 414*. (Washington: Government Printing Office, 1916), 59.

⁵⁶ Correspondence from TJT to Kate Bernard (Juvenile Court), Aug. 7, 1915, Box #1 (13609) Colorado State Penitentiary Thomas J. Tynan, Warden, Administrative and Correspondence, DOC, CSA.

early twentieth century is often defined by evolving racial ideas and hardening tensions, and prisons occupied a central space for producing and testing ideas on race, such as whether segregation yielded more productive laborers or whether Hispanic laborers would not run away under the honor system. Indeed, ideas on race and state policy evolved in the penal system in the context of broader national conversations on race and citizenship. Many reformers, such as environmental conservationists and women's rights and birth control advocates, allied themselves with the eugenics movement to promote state policy that created a homogenous citizenry based on Anglo-Saxon ideals.⁵⁷ Following World War I, these racialized ideals manifested in America's immigration policy. In her analysis of immigration law in the 1920s, historian Mae Ngai finds the realignment of immigration policy and the hardening of legal racial categories.⁵⁸ Policy, therefore, reflected society's prejudices and anxieties about race, and Ngai reveals the dark underbelly of nationalistic protection and state power, arguing: "During the 1920s the legal traditions that had justified racial discrimination against African Americans were extended to other ethno-racial groups in immigration law."⁵⁹ Just as the ideal on an "American" became codified in immigration law, penological ideas also shifted based on societal racial beliefs. In the South, the convict

⁵⁷ For an overview of pseudo-scientific racism and the eugenics movement through the lens of conservationist Madison Grant and his cohort, see: Jonathan Peter Spiro, *Defending the Master Race: Conservation, Eugenics, and the Legacy of Madison Grant* (Burlington, VT: University of Vermont Press, 2009); for a history of environmentalism and racialized ideas, see: Carl A. Zimring, *Clean and White: A History of Environmental Racism in the United States* (New York: New York University Press, 2015);

⁵⁸ For the manifestation of xenophobic ideals in American policy, see: Mae M. Ngai, *Impossible Subjects: Illegal Aliens and the Making of Modern America* (Princeton: Princeton University Press, 2004).

⁵⁹ Ngai, *Impossible Subjects*, 9.

labor system reaffirmed racial ideals and order, while some western programs challenged racial beliefs.

Historians have noted that the Southern penal system grew out of the Reconstruction Amendments as a means of maintaining racial order and subjugating African-Americans.⁶⁰ These programs exploited African-American labor and time to maintain white supremacy. In the post-Civil War South, “southern whites responded to African American claims on freedom,” one historian writes, “by redefining crime and imprisoning unprecedented numbers of black men.”⁶¹ Generally, southern wardens segregated their convict work crews by race, and the segregated crews were not treated equally. Take, for example, a BPR investigative report into the housing conditions in one South Carolina camp: “The beds for the white prisoners consisted of wire springs and iron frames supported one foot above the ground ... The tent for the negro convicts was provided with a flooring consisting of loose boards laid across small logs on the ground. The beds were made up by spreading a tarpaulin over the floor and laying the mattresses and blankets on it.”⁶² African-American suffered poor living and working conditions.

Unlike in the South, Mexicans and Mexican-Americans occupied a prominent place in the western penal system. Mexicans and Mexican-Americans, alongside Euro-Americans, built roads primarily under the honor system. Colorado’s Warden Thomas J. Tynan and his followers integrated these camps to break racial tensions and

⁶⁰ See: Fierce, *Slavery Revisited*; Lichtenstein, *Twice the Work of Free Labor*.

⁶¹ Heather Ann Thompson, “Why Mass Incarceration Matters: Rethinking Crisis, Decline, and Transformation in Postwar American History,” *The Journal of American History* 97, no. 3 (December 2010): 703-734. Dennis Childs argues that the penal system perpetuated the legal and capitalist features of chattel slavery for blacks in Childs, *Slaves of the State*.

⁶² Report of Convict Labor Conditions of South Carolina, “Convict Labor” Folder, 530/21/23/7/Box 112, BPR Series, RG 30, NARA-II.

“Americanize” convicts. This integration challenged racial stereotypes in the late 1910s and early 1920s. When a BPR investigator visited an integrated camp, he remarked: “It is believed by the writer, that the prevailing opinion in this country regards the Mexican as highly untrustworthy, but it was practically the unanimous opinion of all prison and highway officials with whom we talked in the western States that Mexican criminals are fully as worthy of trust as the average American criminal.”⁶³ While the southern system helped maintain a racial hierarchy, some western programs challenged popular racial thought.⁶⁴

In addition to using labor to Americanize Mexican convicts in western penal programs, reformers believed the honor system model could be replicated effectively throughout the nation to instill the American ideal of hard work. This ideal of physical labor underlay assumptions about national contributions. Tynan declared: “It is my opinion that seventy-five per cent of all the prisoners in the different penitentiaries throughout the United States can be worked with perfect safety on the public highways under our system.”⁶⁵ Perhaps Tynan believed his system could break stereotypes of African-American convicts.⁶⁶ Building on Tynan’s belief in the ability to assimilate a

⁶³ Report of Convict Labor Conditions in Colorado, “Convict Labor—CO” Folder, 530/21/23/7/Box 112, BPR Series, RG 30, NARA-II.

⁶⁴ Kelly Lytle-Hernandez has complicated the historiography of convict labor with her analysis of Mexican convict labor in the West showing oppression and discrimination by race and class in *City of Inmates*. Her analysis focuses primarily on the City and County of Los Angeles’ prison system. California, unlike most Western states, used chain gangs under the guard system, which did not allow much opportunity to allow character to disprove racial assumptions, as was the case with the honor system.

⁶⁵ Correspondence from Warden Thomas Tynan, Dec. 23, 1912, “Convict Labor 1913” Folder, 30/530/21/23/6/Box 111, BPR Series, RG 30, NARA-II.

⁶⁶ Tynan was regularly involved in political controversy during his tenure as prison warden. According to him, the Ku Klux Klan during the 1920s (at the height of its power) initiated multiple plots to oust him. Governors Ammon (1913-15) and Sweet (1923-1925) feuded with Tynan openly and often. Although much of the data from these attempts to force Tynan to resign were based on financial accounting, cruelty, or neglect of duty, the KKK’s involvement may have been in response to Tynan’s racial politics.

man of any race through work, road advocates saw immense value of this work ethic—instilling work. During the contemporaneous intense xenophobia, highway advocates insisted hard work would instill American manhood and citizenship. In 1921, the Chief of the Bureau of Public Roads declared: “There are over 16,000,000 foreign born in our country . . . [I]t is imperative that they be law abiding citizens and there seems no surer method of incorporation them into our civilization than to spread them broad cast over the whole country and what better way to do this than to employ them on road construction?”⁶⁷

Hard work on roads, then, was a means to achieve American-ness for convicts whose freedom was limited. This belief reinforced and modernized American ideals of citizenship that can be traced through American history. Just as Thomas Jefferson argued that manhood and citizenship were achieved from hard outdoor agricultural work, penologists and politicians believed that convicts could reclaim their manhood by likewise toiling outdoors and improving the landscape. Codifying the male breadwinner with compensation, creating a healthy and normal body through labor and diet, allowing prisoners to contribute to (and eventually rejoin) society, and instilling a productive outdoor work ethic all fed into traditional ideals of American masculinity.⁶⁸ The honor

⁶⁷ *Memorandum, Highway Production and Transport* by Chief of Bureau, Feb. 26, 1921, “48100 Reconstruction—General—1920-1921” Folder, 30/530/22/14-15/7-1/Box 1591, BPR Series, RG 30, NARA-II.

⁶⁸ Brian Steele argues that Jefferson’s gendered nationalism included an ideal of the yeoman farmer who tilled the land and supported himself and his family while improving the landscape. Jefferson, as Mark Sturges argues, revealed his Lockean belief that that agricultural was a means to assert agrarian independence and citizenship, and thus manhood. Continuing through the nineteenth century, David Leverenz argues manhood was defined by individual physical force and enterprise in the context of competitive community power. While outdoor prison work reified and renewed a traditional form of manhood, citizenship, and independence in America, manhood in the early twentieth century culture was modernized. As Benjamin Jordan shows with the Boy Scouts and Stephen Meyer shows with working-class unions, ideas on manhood in the early twentieth century shifted from outdoor producer individualism to a masculinity defined by modern industrial work in which the worker is no longer the director and manager. Brian Steele, “Thomas Jefferson’s Gender Frontier,” *The Journal of American*

system and guard system programs united behind a rhetoric that rested on Progressive Era social control and moral uplift, yet programs still differed in some ways, such as how racial ideas manifested and whether or not laborers should be compensated. These differences challenge the classical narrative of the development of the penal state after the Civil War: though programs in the South took root in antebellum forms and processes of racial control and unpaid forced labor, programs in the West grew from a belief in the ways that labor could assimilate and Americanize Hispanic Americans and immigrants, with intellectual roots in the Progressive Era's ideology. The convict labor reforms, justifications, and rhetoric of the 1910s and 1920s show the ways the long Progressive movement was realized in penal policy.

Shifting Federalism and National Power

As convict road labor solidified its prominence throughout the nation, the federal government started asserting power over state and local programs. While scholars often recognize the “Yankee leviathan” appearing during the Civil War and resurfacing in the New Deal, America's road building exercise offers a connecting model of federal growth.⁶⁹ With the road program, the modern federal penal state took on a distinctive

History 91, no. 1 (2008): 17-42; Mark Sturges, “Enclosing the Commons: Thomas Jefferson, Agrarian Independence, and Early American Land Policy, 1774-1789,” *The Virginia Magazine of History and Biography* 119, no. 1 (2011): 42-79. David Leverenz, *Manhood and the American Renaissance* (Ithaca: Cornell University Press, 1989); Benjamin René Jordan, *Modern Manhood and the Boy Scouts of America: Citizenship, Race, and the Environment, 1910-1930* (Chapel Hill: The University of North Carolina Press, 2016); Stephen Meyer, *Manhood on the Line: Working-Class Masculinities in the American Heartland* (Urbana: University of Illinois Press, 2016).

⁶⁹ For the early growth of the federal state, see: Stephen Skowronek, *Building a New American State: The Expansion of National Administrative Capacities, 1877-1920* (Cambridge: Cambridge University Press, 1982). For the role of the government in enterprise and how it changed leading up to the New Deal, see: Ellis W. Hawley, *The Great War and the Search for a Modern Order: A History of the American People and Their Institutions, 1917-1913*, 2nd edition (Prospect Heights, IL: Waveland Press, Inc., 1992).

paradigm for crime and punishment. This new state power manifested in two ways: first, the federal highway administrators gained informal power as an information broker; second, the national government asserted its role as a penal administrator, establishing its own convict workforce and defining its penal capabilities.

At the turn of the twentieth century, private interests and state and local authorities dominated convict labor. Beginning, however, in the 1910s, the balance of power shifted from state to federal. Because the federal government recognized power rested at the local level, the national authorities had to accrue informal power by virtue of having centralized and useful information. In the 1910s, the USDA and its Office of Public Roads started collecting data on convict road programs. This USDA investigation culminated in a comprehensive bulletin that laid out the ideal convict road labor model. The USDA intended this bulletin as “an effort to meet this demand for authoritative and practical information.”⁷⁰ The National Highway Association and the National Committee on Prison Labor, for instance, issued a joint call for such centralized guidance: “That forty-five States had laws on their statute-books in 1913 permitting the employment of convicts on State and County roads shows that a solution of the problem does not necessarily lie in legislation but its administration.”⁷¹ The USDA consolidated models on how states established and ran ideal convict labor programs, establishing the federal administrators as information brokers.

States had called for this information: states sought data on convict programs around the nation that efficiently and effectively produced roads, and the highway

⁷⁰ “Convict Labor for Road Work,” *Monthly Review of U.S. Bureau of Labor Statistics* 4, no. 4 (April 1917): 591.

⁷¹ “Honor Men and Good Roads Everywhere,” Folder 2, Box 1, Collection 5966, Kheel Center, Cornell.

bureaucracy had the structure in place to organize national data. Federal highway administrators sent out questionnaires to hundreds of state and local administrators, asking questions about the form of convict labor, the effectiveness of the program, the sanitation and housing of the convicts, and a cost-breakdown of the program. In addition to the questionnaire, national administrative investigators visited camps around the country to conduct in-person reviews of the various programs. The highway investigators enlisted the Public Health Service to involve health and sanitation experts in the survey. The highway office explained their goal to the Surgeon General: “In order that the study may be exhaustive in character, and thereby useful in the highest degree, it is our desire to include in the scope of our investigations not only methods of management, construction, and maintenance, and the economic results of the convict labor, but also such intimately related subjects as sanitation, the health of the convicts, the facilities for the care of the sick and injured.”⁷²

The USDA’s recommendations on food, sanitation, oversight, health, compensation, law, and a range of important issues established the federal highway bureaucracy as an informational clearinghouse regarding penal policy and administration. Above all, the federal highway office maintained a belief that highway engineers needed a greater role in convict labor oversight to ensure efficient road construction. This self-advocacy gave the federal officials responsibility and power by expanding the range of programs under its jurisdiction: the road bureaucracy established a foothold in penal administration. Furthermore, state penal administrators recognized the scale of the project and shared goal of good roads, and they thusly accorded the

⁷² Correspondence from Director of OPR to Surgeon General Rupert Blue, 22 June 1914, “Convict Labor 1913” Folder, 530/21/23/6/Box 111, BPR Series, RG 30, NARA-II.

federal investigators respect. In preparation for the arrival of the USDA field investigators, Warden Tynan noted: “As the government is going to a big expense to conduct these investigations, I feel it my duty to give them my entire time while they are in our state.”⁷³ The federal government accrued power in the penal realm, both directing at a distance and inspecting in-person.

Establishing their credentials as convict road labor experts, the Office of Public Roads sought advice from interests national and international, private and public. In 1913, the Secretary of Commerce undertook a study of convict labor in foreign countries, and the Department of Agriculture incorporated these data in their recommendations.⁷⁴ This transnational discourse fits into a Progressive pattern: influential experts shared ideas on reform across the developed world. In addition to the international discourse, private organizations partook in this dialogue.⁷⁵ Private interests, such as the National Committee on Prisons and Prison Labor, worked with the federal government, lobbying for legislation and according the government legitimacy and support. The NCPPL regularly corresponded with foreign prison and labor officials, and they always sent delegates to the International Prison Congress.⁷⁶ The federal

⁷³ Correspondence from TJT to George Eisler, September 30, 1914, Box #1 (13609) Colorado State Penitentiary Thomas J. Tynan, Warden, Administrative and Correspondence, DOC, COS.

⁷⁴ Tables and Data from the Secretary of Commerce on Criminal Labor, 1913, “Sen63A-J19: 5/26/1913 to 1/27/1914” Folder, Series/Box 129ds: Committee on Education & Labor, RG 46: “Records of the Senate,” NARA.

⁷⁵ For a discussion of the transnational dialogue of the Progressive Era experts and the role of private organizations in shaping public policy, see: Daniel T. Rodgers, *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge: Belknap Press of Harvard University Press, 2000).

⁷⁶ The National Committee on Prisons and Prison Labor (est. 1909), formerly the National Committee on Prison Labor, was a privately founded organization that included prominent individuals in the prison, legal, and social professions. The NCPPL founded a Committee on Honor Men to study the employment of convicts on public highways, and they worked with the Graduate Highway Department of Columbia University to produce multiple reports and studies. For their international work and lobbying efforts, see series of letters and correspondences from c. 1910-1915 in: Folder 2, Box 1, Collection 5966, Kheel Center, Cornell.

highway office's administrators and engineers centralized information from a breadth of local, national, and international entities, bolstering the government's expert credentials and authority.

As the national highway administrators established themselves as information brokers, they became more intimately involved in convict labor outside their legal purview. Even as states ran their own convict labor programs, Bureau of Public Roads field inspectors took on the responsibility of investigating and reporting back to the conditions of convict labor programs when on federal aid system projects. The USDA's used its informational power to advocate for stricter oversight and improved penal conditions. This advocacy entered the USDA into a broader conversation about the treatment of convicts in penal labor programs. The highway bureaucracy, as it had responded to calls for good roads, responded to calls for humane and reforming treatment of prisoners. By the late 1910s, the public was well aware of convict road labor. The states that forced convicts to wear the distinctive striped uniforms made clear to the public the use of convict laborers, and those that abolished distinctive uniforms did it to appease public concerns. For a national audience, though, the public learned about the labor system through books, reports, and, later, a film. Famously, for instance, in 1932, Robert Elliot Burns published *I Am a Fugitive from a Georgia Chain Gang!*⁷⁷ This popular book, complemented by the movie adaptation produced the same year, shed light on the atrocities of the Southern chain gang and garnered public support for

⁷⁷ Robert Elliot Burns, *I Am A Fugitive from a Georgia Chain Gang!* (Vanguard Press, 1932; reprint, Athens: University of Georgia Press, 1997). *I Am a Fugitive from a Chain Gang*, directed by Mervyn LeRoy (1932; Los Angeles, CA: Warner Bros.).

reform of the prison system. While the ethical conversation occurred, public outcry about mistreatment did not bring about the end of the system.

The penologists who published the aforementioned *Bulletin 414* in 1916 intended local politicians and administrators to read and use it. The USDA, however, also used the publication as an opportunity to enter into the broader conversation about the morals of convict labor. In this paper, the USDA, along with their Public Health Services co-investigators, laid bare the details of convict labor programs, exposing conditions and recommending improvements. After describing the possible pitfalls in poor camp sanitation and sewage, the report turned to how “in the great majority of camps visited the sleeping quarters were badly overcrowded, the general rule being to squeeze in as many men as the structures could be made to accommodate.” States maintained an economic goal in their prison program: efficient building of roads at a minimal cost. This report doubled down on the economic importance of sanitation and proper ventilation in sleeping quarters: with overcrowding and poor ventilation “the working power [will be] diminished.”⁷⁸ Similarly, convict camps could not always insure medical care: “In [some] States no medical or surgical supplies are furnished.”⁷⁹ However, the report supplied a recommended list of medical and surgical supplies that every convict camp should stock. Lastly, the report described the variety of sleeping quarters, from permanent structures to steel and wooden cages. The South mainly used the portable cages, while the North, due to public opinion, had switched to constructing structures or pitching tents for convicts. Clearly, then, conditions varied for convicts throughout the country, but none lived comfortably. States skimmed on supplies and

⁷⁸ *United States Department of Agriculture Bulletin No. 414*, 108-109.

⁷⁹ *Ibid.*, 119.



Figure 5.6: This image, taken by a USDA field investigator, shows honor camp convicts building a road in Montana. Note the lack of armed guards, as well as the non-distinctive garb of the convicts. Source: NARA-II, P: 530-21-23-6-111.

other basic convict needs, bolstering the economic argument about the benefits of convict road labor. However, reports and accounts continued to illuminate the unhealthy conditions of the programs.

The federal government began to take power over the states in the realm of convict labor informally, through guidance and recommendations, such as *Bulletin 414*. This informational power also unfolded in a model of oversight: BPR field investigators inspected local and state camps and reported the conditions to Washington, D.C. In 1923, the BPR sent a memorandum to all field inspectors, instructing: “Wherever convict labor has been used on Federal aid work, in your district, it is desired by the Bureau to have a full and very accurate report on the handling of the convict camps.”⁸⁰ Although these programs were outside the BPR’s jurisdiction in the 1920s, the BPR still

⁸⁰ Memorandum from P. St. J. Wilson, July 5, 1923, “Letters & Memos to District Engineers, Aug. 2, 1922 to Dec., 1923” Folder, 30/530/24/21/5/Box 2, BPR Series, RG 30, NARA-II.

gained informal power in oversight, investigation, and guidance. This expanded role came in the context of a parallel growth in federal penal and criminal responsibility, such as with prohibition in 1919. Prohibition laws re-wrote the state's role in criminal regulation and enforcement. "[T]he war on alcohol," McGirr argues, "radically expanded the surveillance arm of the police at the federal, state, and local level."⁸¹ In the context of the state overseeing and guiding how prisons employed convicts on roads, the state itself transformed ideas on criminality and morality, instituting a broader shift that gave the government power in the criminal prosecution.

While the federal government gained power over states and localities as a guide, the government also directly controlled convicts. The national state established its own convict labor programs with federal prisoners. The shift to employing federal convicts on the roads came during the labor shortage of World War I. In conjunction with the War Industries Board, the Department of Justice, and the USDA, the federal government issued a new policy: "all convicts, war prisoners and alien enemies [shall] be used, so far as possible, in the industries producing road materials and equipment, and also in the construction of highways."⁸² With this new position, federal policy was established: convicts became unpaid laborers under federal domain.

The federal penal system boomed in post-WWII America, but to the extent it existed in the 1910s and 1920s, it used convict road laborers.⁸³ By 1930, the Department of Justice operated four federal road camps: Fort Bragg, NC; Camp Lee, VA; Camp

⁸¹ For a discussion of state building and reform as seen through prohibition, see McGirr, *War on Alcohol*, quotations on 37 and 69.

⁸² Policy Briefing in Conjunction with the Department of War, Dec. 15, 1917, "Federal Aid System—1918-17" Item, 530/22/23/6/Box 1956, BPR Series, RG 30, NARA-II.

⁸³ For the rise of mass incarceration following WWII, see: Thompson, "Why Mass Incarceration Matters," 703-734.

Meade, MD; and Fort Riley, KS.⁸⁴ These camps were not federal penitentiaries; they were mobile camps singularly designed to build roads. Most of these camps—and most federal road convict laborers—worked in and around military facilities. Military camps thrived because of the extra labor provided at minimal cost. On prison and military camp logs throughout the 1930s, prisoners accomplished many tasks around camp, yet about 25 percent of prisoners engaged in road work daily—the highest per capita concentration job for convicts.⁸⁵

In addition to these road camps, the federal penitentiary system included three prisons by 1934, and the government used those incarcerated in these three prisons to build roads. Kelly Lytle-Hernández argues that the use of convict road labor spread as the federal prison system expanded, and she finds that Mexican immigrants in the West constructed roads for the federal government throughout their sentences at La Tuna and Tucson Prison Camp #10. At Tucson Prison Camp #10, a hybrid honor-guard system model existed: although the guards did not carry arms, Warden Gaffney (previously a warden in Alabama) made liberal use of harsh punishments.⁸⁶ Prisoners across the national system labored on roads; one of the 43 possible jobs, according to generic federal prison labor time sheets, was road gang work.⁸⁷ The warden at La Tuna saw road work, among other industrial jobs, as a means of “keeping prisoners busy at all

⁸⁴ U.S. Department of Commerce—Bureau of the Census, *Official Register of the United States 1930* (Washington: Government Printing Office, 1930), 44.

⁸⁵ Calculated from a set of Daily Work Logs included in: “4-17-3-7” Folder, 129/250/72/32/00/Box 808, BPR Series, RG 129, NARA-II.

⁸⁶ Lytle-Hernández, *City of Inmates*, 139-144.

⁸⁷ Convict labor timesheets for federal penitentiaries from the 1920s and 1930s are available in the records from each prison. For example, see the Records of Leavenworth, KS Penitentiary in RG 129: “Records of the Bureau of Prisons,” NARA-II.

events.”⁸⁸ The federal penal authorities saw road building as more than a means to create infrastructure; it served to control prisoners’ time and energy. The federal government did not only guide local and state convict labor programs, but the government controlled the time and labor of its own prisoners.

Free Labor, Convict Labor, and the Great Depression

The rise and fall of convict road labor in the United States correlates to the shifting power of and government support for free labor. As road labor employed masses of men, organized labor took interest. Convict road labor’s abolition came slowly: first, states bowed to free labor’s pressure and ended local programs; then, the national government regulated convict labor use, abolishing it on federal aid roads. Free labor’s ire, paired with the Great Depression’s devastation, rang convict road labor’s (technical and public) death knell. Heather Ann Thompson finds that in the post-WWII period “mass incarceration also mattered to the fate of the American labor movement” in that it undercut the power of organized labor.⁸⁹ Preceding the new order of mass incarceration that Thompson studies, however, we find a model in which organized labor and government activism fundamentally altered convict labor.

When states and the federal government ramped up their convict road labor program through the 1910s, free labor did not view road construction as its greatest threat. Samuel Gompers, President of the American Federation of Labor, blessed the plan to employ convicts on roads: “It is my opinion that the least possible competition

⁸⁸ Correspondence from Warden, Oct. 9, 1935, “Administrative Files, Class 4 (Prison Matters), 1930-37,” 129/250/74/13/00/Box 953, RG 129: “Records of the Bureau of Prisons,” NARA-II.

⁸⁹ Thompson, “Why Mass Incarceration Matters,” 703-734.

of prisoners as against free labor would ensure in the building of roads which would not only be beneficial to the prisoners, but would to some extent relieve the taxpayer.”⁹⁰ When debating the 1916 federal aid highway act, some Congressmen voiced concern over the potential competition between free labor and convict labor. That competition, however, took nearly a decade to come to fruition, and no one made much fuss in 1916. Throughout the 1910s and early 1920s, free laborers preferred convict labor on the roads because it diminished competition in the industries that employed masses of free laborers (i.e., mines and factories). In addition to supporting and informing state-level convict road labor, federal administrators endorsed convict labor as a policy for federal aid roads.⁹¹

As road building became a labor-intensive endeavor on a massive scale in the 1920s, free laborers revolted against convict labor. In Utah, for example, the first major road project by convict laborers saved the state \$14,631.75 in labor costs. However, over 500 Utahns protested, for the convicts, they argued, took potential jobs from the unemployed. The American Federation of Labor also got involved: they lobbied at the state level in favor of the free laborer’s demands. Utah responded. The state’s legislature terminated the use of convict road labor by 1930.⁹² When other states faced similar protest, they did as Utah did: ending convict road labor programs. In Montana, for instance, “road projects were the most visible of the convict labor programs and almost immediately drew fire from labor unions.” Just as happened in Utah, labor’s opposition

⁹⁰ Quoted in Sidney Wilmot, “Good Roads and Convict Labor,” *Journal of the American Institute of Criminal Law and Criminology* 5, no. 5 (1915): 777-83.

⁹¹ Correspondence from Secretary of Agriculture to Chairman of American Association of State Highway Officials, 8 February 1917, “Letters & Memoranda from Secretary & Solicitor re Federal Aid from 3-31-1917 to 10-16-1919” Folder, 530/24/21/5/Box 5, BPR Series, RG 30, NARA-II.

⁹² Virgil Caleb Pierce, “Utah’s First Convict Labor Camp,” *Utah Historical Quarterly* 42 (summer 1974): 245-57.

in the 1920s catalyzed the end of Montana's convict road labor program.⁹³ This pattern repeated itself in states throughout the nation. During these contentious years when free labor fought convict labor, the proponents of convict road labor held to two arguments: first, they echoed the Progressive reformers' claim that outdoor road work rehabilitated convicts; second, they claimed free laborers did not lose work because the state or locality could not otherwise afford the projects.

Through the 1920s, free laborers and organized labor worked at the state level as policy decisions remained with local authorities. The BPR, too, recognized this local authority. For example, a small group of irate Arkansas farmers "stormed a road camp demanding work." When the county and state ignored their pleas, the farmers turned to the federal government. The Bureau of Public Roads abdicated responsibility, returning the problem to the local domain, noting; "we have no authority to insist on contractors employing any particular class of labor."⁹⁴ Even as the BPR told these farmers to deal with labor at the local level, power shifted. Just as individuals turned to the national government, organized labor organizations did likewise. Despite claiming that "The prison labor problem is primarily a problem for the state to solve rather than the federal government," the American Federation of Labor turned its sights on federal lawmakers. In the late 1920s, they issued a new policy that reflected the new federalist balance: "The national government," the AFL's Executive Committee declared, "should protest and aid in the enforcement of the laws of several states attempting to solve this

⁹³ Jon Axline, "Building Permanent and Substantial Roads: Prison Labor on Montana's Highways, 1910-1925," *Montana: The Magazine of Western History* 62, no. 2 (2012): 59-66, 95-96.

⁹⁴ Although the BPR asserted that they did not have the authority to regulate labor at the state level, they did believe that they should persuade states and contractors to give relief to local laborers where possible. Correspondence from Thomas H. MacDonald to All District Engineers, Sep. 12, 1930, "1933-17" Folder, 530/22/22/1/Box 1870, BPR Series, RG 30, NARA-II.

problem.”⁹⁵ Already in the 1920s, laborers lobbied the government—the entity they saw as growing increasingly powerful.

While free labor initiated the federal conversation concerning convict labor, the Great Depression settled it. During the Great Depression unemployment skyrocketed and wages plummeted.⁹⁶ Politicians had long seen road building as a means to boost employment, claiming that 90 percent of the investment went directly to laborers. BPR officials held that for every one man directly employed on the road, whether convict or free, two more worked in another part of the road building process, such as transporting materials or crushing rock. As Congress debated how to ameliorate unemployment, federal aid and road building took center stage. At the outset, the National Industrial Recovery Act allotted \$400 million for road construction, and road construction efforts received billions of dollars throughout the New Deal. This money, though, came with strings attached: regulations on local labor.

In January 1932, Congress debated the Agricultural Appropriation Act for the upcoming year. This piece of legislation included the road building appropriation—an appropriation significantly greater than before because the dire need for employing laborers throughout the country. Representative Fiorello La Guardia (R-NY) offered an amendment: “none of the money herein appropriated shall be paid to any State on account of any project on which convict labor shall be directly employed.” Years of free labor’s lobbying culminated in this qualification, and this anti-convict statute established a precedent for subsequent New Deal legislation. During the ensuing debate,

⁹⁵ Minutes of the Executive Council 1925-2955: Report on Convict Labor (pp. 8), Reel 1, Collection 5918 mf: Minutes of the Executive Council of AFL, Pt. 2 on Microfilm, Kheel Center, Cornell.

⁹⁶ For an overview of the Great Depression years, see Conclusion.

La Guardia championed the unemployed: "Surely we can not take a convict who has violated the law, who is in prison, and put him in competition with a law-abiding man supporting his family and educating his children ... A convict at least gets shelter, food, and clothing—an unemployed worker starves if he can not earn money by being honestly employed."⁹⁷ Regulating state labor policies represents a significant increase in federal power.

This 1932 convict labor amendment constituted a new stage in the decades-long conflict over states' rights and federal power. Representative William P. Holaday set the tone of this 1932 debate, arguing that full employment trumped any fears of federal overreach: "That [federal regulation] may savor of socialism or communism, or whatever you wish to call it, but the economic conditions of this country will not be remedied permanently and satisfactorily until every man has an opportunity to labor ... When money is expended for public roads and a man has a chance to earn a living, he is performing a permanent service to the country."⁹⁸ The dignity labor conferred upon prisoners, Holaday argued, overshadowed any federal overreach. The debate over this amendment boiled down to simple arguments: friends of the amendment noted the unemployment crisis; enemies of the amendment invoked the Progressive reform rhetoric, claiming that states needed to occupy and reform convicts. Ultimately, the Senate and House accepted the La Guardia amendment.

In the 1932 debate, politicians debated convict labor only in the context of road building. They omitted discussion of the broader legality of convict labor. Convict labor,

⁹⁷ U.S. Congress, *Journal of the House of Representatives of the United States*, 72nd Cong., 1st sess., January 26, 1932, 2743.

⁹⁸ Representative Holaday speaking on HR 12443 on January 26, 1932, 72nd Cong., 1st sess., *Congressional Record* 75, pt. 3:2743.

as a whole, was not up for debate; the Thirteenth Amendment had enshrined convict labor not only in American law but in the minds of its leaders. Indeed, American penology rested on ideals of punishment and labor. Even *La Guardia* did not question convict labor in the 1932 debate, just public convict road labor: by eliminating “directly” from the clause “convict labor shall be directly employed” convict labor, the amendment satisfied free labors while offering states sufficient ambiguity to maintain road programs. The language implicitly sanctioned convict labor away from the public’s view or strict definition of road work, such as in rock crushing, which states argued was not road labor but a peripheral form of convict labor. In subsequent years, Congress omitted “directly” when they passed road aid bills. “The intent of this omission,” the BPR claimed, “is to prohibit indirect as well as direct employment of convicts on Federal aid projects.”⁹⁹ State solicitors, however, disagreed, and prisoners continued toiling on peripheral road projects. Prison labor, supported by the Constitution, was natural, and the federal government regulated it but did not abolish it. The regulation satisfied free labor by pushing any remaining convict labor further from the public gaze. With this state-run convict labor system and a model of economically beneficial incarceration (for the state and public), we find a new iteration of state penal power and the roots of the penal state.

Conclusion

In 1883, the United States Supreme Court considered the validity of the Civil

⁹⁹ Correspondence from Bureau of Public Roads District Engineer to Michigan State Highway Engineer, 29 March 1933, “Mich—1933” Folder, 530/22/37/1/Box 2460, BPR Series, RG 30, NARA-II.

Rights Act of 1875. In the majority opinion, Joseph P. Bradley commented on much more than whether or not the Civil Rights Act violated the Tenth Amendment. Commenting on the Thirteenth Amendment, Bradley opined: “By its own unaided force and effect, it abolished slavery and established universal freedom.”¹⁰⁰ This freedom, however, came with qualifications. This freedom relied on the U.S. judicial system, for anyone convicted of a crime could be forced into labor.

Convict road labor reveals one way the state gained and used its new road power. Wherever roads went, convicts toiled. Spreading across the country, politicians, road advocates, and penologists relied on Progressive Era reform ideology and the Thirteenth Amendment’s criminal exemption clause. Only public ire and activism brought an end to one form—the publicly visible form—of convict labor. Penologists, citizens, and reformers all believed that convicts owed a debt to society, and they believed convict road labor could simultaneously allow the convict to repay his debt to society while gaining dignity and skills. “The state should do all in its power,” Joseph Hyde Pratt opined, “to impress upon the prisoner that the punishment the state has meted out to him is simply to make him pay a debt that he owes to the state and to society, and that when he has paid this debt, the state expects him to take his place in that society as a citizen.”¹⁰¹ Convicts had the potential to reform, but the way they reformed was dictated by state ideals of citizenship as the state used its road power to restrict freedoms and construct infrastructure.

¹⁰⁰ *Civil Rights Cases*, 109 U.S. 20 (1883), pg. 109.

¹⁰¹ Joseph Hyde Pratt, “Convict Labor in Highway Construction,” *The Annals of the American Academy of Political and Social Science* 46 (Mar. 1913), 85.

Conclusion: “The Only National Agency Actually Organized to Execute”

The Great Depression and New Deal have long been topics of fascination by scholars, politicians, and historians.¹ With so much ink dedicated to the brief, yet consequential decade, what remains to be learned? The subject of roads offers an analytical tool that connects disparate aspects of this decade and presents this era on a continuum of state development, radical in scale and scope but not authority and administration.² When looking at the Bureau of Public Roads, the government’s

¹ For the sake of this study, the New Deal politics end with the onset of World War II. Some scholars, such as Ira Katznelson, extend New Deal politics through the Truman administration. This study, however, follows Alan Brinkley’s chronological end to the New Deal in 1939. See: Alan Brinkley, *The End of Reform: New Deal Liberalism in Recession and War* (New York: Vintage Books, 1996); Ira Katznelson, *Fear Itself: The New Deal and the Origins of Our Time* (New York: Liveright Publishing Corporation, 2013),

² On the New Deal state and liberalism, see: David M. Kennedy, *Freedom From Fear: The American People in Depression and War, 1929-1945* (New York: Oxford University Press); Anthony J. Badger, *The New Deal: The Depression Years, 1933-1940* (New York: Ivan R. Dee, 1989); Alan Brinkley, *The End of Reform: New Deal Liberalism in Recession and War* (New York: Vintage Books, 1996); Ira Katznelson, *Fear Itself: The New Deal and the Origins of Our Time* (New York: Liveright Publishing Corporation, 2013); William E. Leuchtenburg, “The Great Depression” in *The Comparative Approach to American History*, ed. C. Van Woodard (New York: Oxford University Press, 1997); Jason Scott Smith, *Building New Deal Liberalism: The Political Economy of Public Works, 1933-1956* (Cambridge: Cambridge University Press, 2006); Eliot A. Rosen, *Roosevelt, The Great Depression, and the Economics of Recovery* (Charlottesville, VA: University of Virginia Press, 2005); Jason Scott Smith, *A Concise History of the New Deal* (Cambridge: Cambridge University Press, 2014). On the role of race in the New Deal reforms, see: Harvard Sitkoff, *A New Deal for Blacks: The Emergence of Civil Rights as a National Issue: The Depression Decade, 30th Anniversary Edition* (New York: Oxford University Press, 2009); John Kirby, *Black Americans in the Roosevelt Era: Liberalism and Race* (Knoxville: University of Tennessee Press, 1980); Nancy Grant, *The TVA and Black Americans: Planning for the Status Quo* (Philadelphia: Temple University Press, 1990); William E. Leuchtenburg, *The White House Looks South: Franklin D. Roosevelt, Harry S. Truman, Lyndon B. Johnson* (Baton Rouge: LSU Press, 2005); William E. O’Brien, *Landscapes of Exclusion: State Parks and Jim Crow in the American South* (Amherst and Boston: University of Massachusetts Press, 2016), Lauren Rebecca Sklaroff, *Black Culture and the New Deal: The Quest for Civil Rights in the Roosevelt Era* (Chapel Hill: University of North Carolina Press, 2009); Holly Allen, *Forgotten Men and Fallen Women: The Cultural Politics of New Deal Narratives* (Ithaca: Cornell University Press, 2015). On arts and culture during the New Deal, see: Morris Dickstein, *Dancing in the Dark: A Cultural History of the Great Depression* (New York: W.W. Norton & Company, 2010); Camille Bégin, *Taste the Nation: The New Deal Search for America’s Food* (Urbana: University of Illinois Press, 2016). On specific New Deal government programs, see: Neil Maher, *Nature’s New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement* (New York: Oxford University Press, 2008); Susan Rubenstein DeMasi, *Henry Alsberg: The Driving Force of the New Deal Federal Writers’ Project* (Jefferson, NC: McFarland & Company, Inc., Publishers, 2016). On migrations and demographic shifts during the Great Depression, see: Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (New York: Oxford University Press, 1979 repr. 2004); Darren Dochuk, *From Bible Belt to Sunbelt: Plain-Folk Religion, Grassroots Politics, and the Rise of Evangelical Conservatism* (New York: W.W. Norton & Co., 2011).

authority, and public works during the Great Depression and New Deal, an analysis of roads offers continuity from the long Progressive Era.³

For nearly four decades, America's road building authorities had accrued centralized power. Beginning as the humble Office of Road Inquiry in 1893, the Bureau of Public Roads eventually became a dominant force in American politics and culture. During the Depression decade, America realized the full potential of its highway program, ultimately reshaping the government's relationship with and responsibility to individual citizens. The catastrophic economic realities beginning in 1929 and exacerbated by the Hawley-Smoot Tariff of 1930 required American policymakers to use large-scale public work projects, especially roads, to respond to the needs of the American people. As infrastructure development became a centerpiece of employment policies, President Franklin D. Roosevelt and his administration modeled New Deal programs and agencies on the template developed by the Bureau of Public Roads.

While the Depression ushered in an era of responsive government, this model of federal bureaucratic authority and action built on decades of precedent and success. Ultimately, roads became the dominant symbol of the 1930s. In addition to roads representing the heart of the New Deal's public works projects, roads helped solidify the Depression zeitgeist: hope, despair, opportunity, and flight. New Deal art and writing programs, for instance, used the highways to showcase the country's progressive

³ On the trouble with periodization in American history, particularly concerning the nebulous Progressive Era and how it melded with both the prior Gilded Age and subsequent New Deal, see: Rebecca Edwards, "Politics, Social Movements, and the Periodization of the U.S. History," *The Journal of the Gilded Age and Progressive Era* 8, no. 4 (Oct. 2009): 463-473. For the complexity of periodization seen in the Progressive Era historiography, see: Stephen J. Diner, "Linking Politics and People: The Historiography of the Progressive Era," *OAH Magazine of History* 13, no. 3 (Spring 1999): 5-9. On the lasting political contributions of the Progressive Era to the development of the American state, see: Robert Harrison, *Congress, Progressive Reform, and the New American State* (Cambridge: Cambridge University Press, 2004).

history, solidify narratives of cultural regionalism, and create sympathy for those fleeing hardship on the roads. The New Deal's two greatest legacies stood on the shoulders of the road program: first, the lasting model of liberal democracy grew from the roots of the road development program; second, the Federal Writers' Project's *American Guide* series showcased the nation and all its local peculiarities through highway tours. America's road program's growth culminated in the New Deal, and this historical continuity offers perspective into Franklin D. Roosevelt's administration and the role of the modern liberal state.

The success between the first federal aid highway act in 1916 and the onset of the Depression in 1929 proved useful to New Dealers formulating national recovery plans and policies. As the BPR's federal-state cooperative model solidified through the 1920s, America saw the success of this road program. By 1929, Americans registered over 25 million automobiles and trucks. Throughout America, motorists could drive these vehicles across the over 3,270,000 miles of road.⁴ By the onset of the Great Depression, America had built a national highway system, and the nation's citizens took advantage of the national motoring opportunities. A 1929-1930 traffic survey, for instance, found that in the Far West as a whole, 22 percent of out-of-state traffic originated in the Central Plains states, 12 percent originated in the Northeast, and 25 percent came from California alone.⁵ Roads connected the nation, and Americans understood the power of an effective federal aid system. During the Depression road

⁴ United States Department of Transportation—Federal Highway Administration, *Selected Highway Statistics and Charts 1984*, available at: <https://www.fhwa.dot.gov/policyinformation/hsspubsarc.cfm> accessed December 6, 2017; United States Department of Transportation—Federal Highway Administration, *Chart VMT-421C, Public Road Mileage – VMT – Lane Miles, 1920-2013*, available at: <https://www.fhwa.dot.gov/policyinformation/statistics/2013/vmt421c.cfm>, accessed December 6, 2017.

⁵ Data from: Peter J. Blodgett, ed., *Motoring West: Automobile Pioneers, 1900-1909* (Norman, OK: The Arthur H. Clark Company, 2015), 27

building continued, despite the economic tumult. Because the model worked and citizens, both skilled and unskilled, found employment, “the highway boom of the 1920s,” one historian observes, “continued despite the Depression.”⁶ While America boasted only 694,000 miles of surfaced highway in 1930, the nation nearly doubled that figure by 1940, with 1,367,000 miles.⁷ The highway project linked Depression Era America culturally, politically, and economically.

Every sector of the economy felt the effects of this Depression, and the established and effective national road program offered a useful model for recovery politics. Because of the miserable economic conditions, American citizens called directly on their government for assistance—food, security, and employment. The BPR and highway development offered a ready and effective system, and the relief programs of the Great Depression ought to be understood through the lens of the road building framework. America’s road program and public works opportunities had long been touted as a tool to alleviate unemployment, even before the crash. Just a few years after the U.S. Congress initially funded federal aid road construction, the nation saw a brief yet hard-hitting economic crisis. During this downturn between January 1920 and June 1921, BPR administrators highlighted the benefits of road construction, both in creating infrastructure and in employing skilled and unskilled workers. Thus, when the economy collapsed after 1929, the highway administration was primed to argue that large-scale government-led projects were the answer to economic woes.

⁶ Bruce E. Seely, *Building the American Highway: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987), 212.

⁷ Data from: Seely, *Building the American Highway System*, 212.

When the Depression hit, Herbert Hoover, an ardent believer in laissez-faire economics, led the country. This challenge tested his ideological commitment and ultimately forced him to initiate a modicum of government relief. In the early years of the Depression, Hoover helped provide states an extra \$50 million through the 1930 appropriations bill specifically for road construction. “Cooperating with President Hoover,” the BPR noted, “in his pleas to enlarge all construction programs as much as is practicable to ameliorate the unemployment situation,” states increased their highway spending in 1930, despite the bleak economic reality.⁸

Swayed by an activist Congress and public opinion, Hoover signed the Reconstruction Finance Corporation (RFC) into law in January 1932 to try to spur the economy. The RFC, coupled with the Emergency Relief and Construction Act (ERCA) provided \$500 million and an authorization to borrow an additional \$1.5 billion, for emergency loans to financial, agricultural, and infrastructural sectors, including loans for construction work on roads. Rather than providing direct employment relief, the RFC relied on a trickle-down economic approach. With his support, however reluctant, of the RFC and ERCA, “Hoover had given up the ground of high principle. He now stood ideologically shorn before a storm of demands for unemployment relief.”⁹ The ERCA shaped how the government would respond to this disaster, establishing a precedent of relief through public works. The RFC and ERCA, as Jason Scott Smith notes, “created a new division to supervise the construction of self-liquidating public works, forging direct financial relationships between the federal government and state

⁸ BPR Press Release of March 15, 1930; “1930” Folder, 530/24/22/1/Box 8, “Bureau of Public Roads Classified Central File 1912-1950” Series, RG 30, NARA-II (hereafter: BPR Series, RG 30, NARA-II).

⁹ Kennedy, *Freedom From Fear*, 85.

and local levels of government.”¹⁰ This relationship—advancing loans to ensure continued federal aid construction projects—secured continued infrastructural development on federal-local networks and relationships fostered by the BPR. By advancing state money to match federal aid, a key regulation of the federal aid road program, the federal government helped elevate the federal-state cooperative public works programs established in 1916. Furthermore, the U.S. Congress privileged road construction through the RFC’s processes; in fact, in 1932, when debated in the ERCA, representatives advocated for the passage of the act specifically “for expenditure in emergency construction on the Federal-aid highway system, with a view to increasing employment.”¹¹

Though Hoover took some steps to enlarge the government’s spending, his approach did little to alleviate the impact of the Depression, leading to Franklin D. Roosevelt’s sweeping presidential election in 1932. Roosevelt ran on a platform that asserted that the government had a responsibility to aid the unemployed. Upon his election, FDR pledged a “New Deal” for the American people. Noting how Roosevelt’s election changed American reform ideology, one historian determined: “The older generation of reformers wanted to improve society by changing people’s morals; New Dealers, in contrast, wanted to reform society by fixing political institutions and better regulating the market economy.”¹²

In addition to a model for centralized infrastructure projects refined by the BPR, public works projects had a proven record of success in employment and national

¹⁰ Smith, *Concise History of the New Deal*, 49-50.

¹¹ *Hearing Before The Committee On Roads, House of Representatives, On H.R. 9642, February 23 and 24, 1932, 72nd Congress, First Session* (Washington: Government Printing Office, 1932).

¹² Smith, *Concise History of the New Deal*, 40.

development. New Dealers and road administrators claimed that 85 to 95 percent of money invested in roads went to the laborers, both skilled and unskilled, making this type of work an incredible investment.¹³ Because the BPR had developed an effective national administration, New Dealers could sell the nation on the countrywide development roads offered, for every state could build roads. Indeed, one advocate claimed: “There is universal concensus [sic] of opinion that no Federal function has given or is giving the people more for the money expended than Federal grants and aid to highway building.”¹⁴ Between 1933 and 1939, the federal government’s large-scale public works projects employed millions. Total federal spending during this downturn increased from \$4.6 billion to \$8.8 billion, and approximately one-third of all public works endeavors during this period were street and highway projects.¹⁵

While Roosevelt’s New Deal built on the political and administrative traditions developed in the road building program, it differed in scale, scope, and justification. The justification for this spending shifted during this period, as politicians responded directly to their constituents. “New Dealers, then, framed the public works of the P[ublic] W[orks] A[dministration] and W[orks] P[rogress] A[dministration] – as well as the entire New Deal, itself – as following in a long history of using government to

¹³ See, for example: *Hearing Before The Committee On Roads, House of Representatives, On H.R. 9642, February 23 and 24, 1932, 72nd Congress, First Session* (Washington: Government Printing Office, 1932), 3; Address “What Highways Mean in the Economic, Educational and Social Life of the United States,” Jan. 1933, Folder 133; “Federal Aid Road Construction as Employment for Labor,” 1931, Folder 147, Box 6, Series 1: Personal, Thomas H. MacDonald Collection, Cushing Memorial Library & Archives, Texas A&M University Libraries (hereafter: THM Collection, Cushing Library, TAM).

¹⁴ Will M. Whittington, “Federal Obligations in Developing a Highway System” Pamphlet, in Box 9, Folder 11, Series 3: U.S. House of Representatives, 1926-1942, Carl Albert Congressional Research and Studies Center, the University of Oklahoma.

¹⁵ Civil Service employees and federal spending data from: Katznelson, *Fear Itself*, 36; public work project categorization data from: Smith, *Building New Deal Liberalism*, 88-89

foster economic development, with the key difference being that this time ‘the people’ rather than ‘the interests’ would benefit.”¹⁶ The New Deal public works program was the culmination of years of priming the American public to accept federal developmental initiatives. The Great Depression was the catalyst that allowed this shift. As the *New York Times* explained of the philosophical, but not administrative, turn: “The underlying philosophy of Federal participation, however, has changed. Road construction is thought of primarily in terms of jobs for idle men, not as a means of completing an unfinished network that will serve the social, economic and military needs of a nation spread over an area of 3,000,000 square miles.”¹⁷

Road construction served as a centerpiece of Roosevelt’s initial efforts to fight the Depression. Of course, the New Deal comprised more than just infrastructure development: banking reform, alcohol legalization, home and farm refinancing, and gold standard abolition. Public works, however, comprised the most comprehensive and costly part of the New Deal. From 1933 through 1939, the federal government approved 34,508 projects in 3,068 of America’s 3,071 counties estimated at a cost exceeding \$6 billion. Of those public works endeavors, 11,428 were street and highway projects.¹⁸ In the first year of his presidency, President Roosevelt signed into law four major programs that sought to alleviate the unemployment crisis through public works expenditures: Civilian Conservation Corps on March 31, Federal Emergency Relief Administration on May 12, National Industrial Recovery Act on June 16, and Civil Works Administration on November 8. Together, these programs constituted a major shift in

¹⁶ Smith, *Building New Deal Liberalism*, 121

¹⁷ William Ullman, “Nation’s Highway Work Now Carried On Under New Plan,” *The New York Times*, January 7, 1934.

¹⁸ Smith, *Building New Deal Liberalism*, 88-89

federal policy, reflecting the culmination of the federal-state cooperative model and a new relationship between the federal state and the individual citizen. These programs, though, did not all succeed immediately: they faced backlash, administrative difficulties, and outright failures.

One of the first programs FDR set up was the Civilian Conservation Corps (CCC). Established in the Reforestation Relief Act, the CCC provided immediate work for 250,000 young men developing national and state parks and laboring on natural resource conservation programs. Over the course of its tenure, the CCC employed between 2.5 and 3 million men. The CCC paid its employees \$30 per month and required them to send \$25 of the pay to their families each month. This stipulation is reminiscent of the program established in most states' convict labor regimes, mandating that men support their families. "Probably the single most popular and least controversial of all the New Deal agencies," the CCC developed 800 new parks and built over 10,000 reservoirs, 46,000 bridges, 125,000 miles of new roads (while improving 600,000 miles of existing roads), and 28,000 miles of hiking trails (while improving another 100,000 miles of existing trails).¹⁹ The CCC's singular goal—development of natural resources—spurred its success. This program rose quickly because it replicated two important aspects of the road program: it employed men across the country on local and state projects, and it had material results to show for the government expenditures.

Just a few weeks after FDR implemented the CCC, he established the Federal Emergency Relief Administration (FERA). Both the CCC and FERA, two of the first

¹⁹ David M. Wrobel, *America's West: A History, 1890-1950* (Cambridge: Cambridge University Press, 2017), 143.

measures of the New Deal's famous first hundred days "constituted," as historian David Kennedy argues, "important steps along the road to direct federal involvement in unemployment." FERA's "odd and unwieldy administrative architecture reflected the peculiar characteristics of the American federal state, and underlined, too, the strikingly sparse administrative capacity of the federal government."²⁰ Though the federal state's ability and organization was "strikingly sparse," FERA's task was not unprecedented. FERA received \$500 million to infuse into the economy, half of which was at the discretion of its director Harry Hopkins and the other half was distributed to the states on a matching basis, with one federal dollar to every three state dollars. This federal-state matching formula reflected the successful model pioneered by the Highway Act of 1916. Because of the rapid need to establish a federal bureaucracy with such administrative power, however, FERA crumbled under the task: FERA moneys often went to welfare instead of development. Without clear guidance on the type of developmental programs by which to define itself, such as the BPR had with roads and its clear process of approval and the CCC had with its conservation resource and road development, the FERA was short-lived. Its successor agency, the Public Works Administration, learned from FERA's mistake and quickly figured out what projects to prioritize and what type of project employed the most men.

The cornerstone of FDR's employment programs came when he signed the National Industrial Recovery Act (NIRA) in mid-June. Immediately after Roosevelt signed the legislation, the BPR's press office celebrated the \$400 million appropriation

²⁰ Kennedy, *Freedom From Fear*, 171

for roads.²¹ The BPR celebrated because the NIRA established a public works program that modelled itself on the BPR's successful administration of federal projects and moneys. The National Industrial Recovery Act accomplished two goals: first, it established the Public Works Administration (PWA), which supervised the construction of roads, public buildings, dams, and other public works; second, it created the National Recovery Administration (NRA), which implemented voluntary labor and industrial codes to stimulate industry.

Within two months, the BPR announced: "Dirt began to fly today as men long without jobs went back to work on a public works road project." Continuing, the press office announced: "The first objective of the Public Works Administration—removing men from relief rolls on to payrolls—has been reached."²² By the beginning of 1934, the BPR counted 956,000 men employed "in highway and dependent work." Announcing this peak employment, the United States Department of Agriculture declared: "MILLION HIGHWAY WORKERS RECORD AN ALL-TIME HIGH."²³ The government regularly celebrated the completion of its objective to employ workers because of the governmental shift in responsibility: while they continued to highlight the number of miles built and the cities connected, the focus of the announcements shifted to the number of men employed, who received paychecks and restored their personal dignity.

²¹ BPR Press Release of June 23, 1933, "1933" Folder, 530/24/22/1/Box 8, BPR Series, RG 30, NARA-II.

²² BPR Press Release of August 3, 1933, "1933" Folder, 530/24/22/1/Box 8, BPR Series, RG 30, NARA-II.

²³ USDA Press Release of February 12, 1934, "1934 – File Copies" Folder, 530/24/22/1/Box 8, BPR Series, RG 30, NARA-II.

Beyond the structure, the PWA's leadership repeated the rhetorical and technocratic justifications the BPR had perfected. The PWA appointed civil and military engineers to its staff "who were skilled at construction, instead of hiring social workers who were experienced in dealing with the unemployed."²⁴ The reason behind privileging engineers again rested on similar logic employed by MacDonald's BPR: to ensure continued public support, the BPR relied on the popular belief in experts to justify the spending program. Similarly echoing earlier BPR claims, Harold Ickes, the PWA's leader, argued: "For every hundred thousand men at work on public works project there are at least an equal number at work back of the lines in saw mills, in steel mills, in factories, in quarries, and on railroads."²⁵ The PWA maintained its stature as a partnership, stimulating both private and public employment mechanisms. The PWA, in addition to focusing on building streets and highways, built an acceptable model so rapidly and effectively because the framework was not unprecedented: the BPR provided the PWA's leadership with a roadmap.

The CCC, FERA, and PWA represent the New Deal's initial attempts to curb unemployment and help the nation. These programs also represent the clear successors to the BPR. While the CCC and FERA each embodied some components of the BPR model, the PWA succeeded (and lasted the duration of the New Deal) because it fully articulated its cooperative federal-state model and built public support for both the expenditures and the product. The PWA's success followed in the footsteps of efforts BPR administrators took to shore up its support. Though these efforts spurred some unemployment relief, Roosevelt and his advisors fretted over the first winter of his

²⁴ Smith, *Building New Deal Liberalism*, 33.

²⁵ Quoted in: *Ibid.*, 78.

presidency. The President ensured security through the winter in the form of the Civil Works Administration (CWA), a project that lasted from November 1933 through March 1934. This short-lived program recognized the national scope of the Depression and the issue of rapidly establishing a program that could reach all sections of the country. The CWA, then, worked through the Veterans Administration because the VA had a “truly national disbursement system in place.”²⁶ By January 1934, the CWA employed 4.2 million people, improving roads and bridges, refurbishing schools and hospitals, and developing city infrastructure. The cost of the program, nearly \$200 million per month, forced Roosevelt to terminate it in March 1934. The program shows, though, that FDR and his advisors recognized the scope of their work, and they looked for national bureaucratic systems through which they could reach the nation.

After the jump-started CCC and FERA attempted to work out some type of coherent and effective model, the CCC and PWA relied on processes and mechanisms that had been tested prior to the Depression. The highway program provided the government with an example, and Thomas MacDonald realized this. Addressing the American Association of State Highway Officials in 1933, MacDonald reflected:

To achieve effective results, agencies capable of functioning on a country-wide scale were essential. It was inevitable that the State and Federal highway organizations should be called upon to take a prominent position on the front line of the offensive operation since, together, they constituted the only national agency actually organized to execute public works on a scale adequate to sustain existing and to provide increased employment through properly planned and competently executed construction projects.²⁷

²⁶ Kennedy, *Freedom From Fear*, 175

²⁷ Address: “The Highway Recovery Program,” Oct. 9, 1933, Box 6, Folder 148, Series 1: Personal, Thomas H. MacDonald Collection, Cushing Memorial Library & Archives, Texas A&M University Libraries.

The liberal federal state expanded dramatically during the first years of the New Deal, and most of the programs followed in the institutional and administrative footsteps of the BPR. Thomas MacDonald regularly trumpeted his claim that “Economic recovery cannot be helped by a breakdown in our sound highway administration policies.”²⁸ MacDonald, while complacent as the Chief of the BPR and not needing his own separate New Deal agency for roads, reminded state and national highway officials of their central position in helping New Deal projects succeed: “The spirit of the moment is cooperation. In the National Administration there are many agencies which can be of great assistance to the State highway departments and which will also need the cooperation of these departments. Among those most closely related to our immediate problems are the Federal Emergency Administration of Public Works, the National Industrial Recovery Administration, the Federal Emergency Relief Administration, the U.S. Employment Service, the National Planning Board and the Federal Coordinator of Transportation.”²⁹ The BPR model and activities were central to nearly every component of FDR’s recovery and relief program.

In addition to expanding the scale of federal governmental action, the New Deal state, assisted by the natural consequences of the Great Depression itself, re-made the cultural landscape of the nation. As the Great Depression posed new identity-defining questions that came to shadow every program, the highways played a central role in helping to shape the American consciousness, engraining new ideas in the national psyche and memory. These new cultural definitions, as defined through the music, art,

²⁸ Address: “What Highways Mean in the Economic, Educational and Social Life of the United States,” Jan. 1933, Box 6, Folder 133, Series 1: Personal, THM Collection, Cushing Library, TAM.

²⁹ Address: “The Highway Recovery Program,” Oct. 9, 1933, Box 6, Folder 148, Series 1: Personal, THM Collection, Cushing Library, TAM.

photography, and literature of the period, cemented a nationalistic narrative that centered on the meaning of and opportunities from highways. Artists, such as Woody Guthrie, Archibald MacLeish, Dorothea Lange, and John Steinbeck, transformed the highway into a symbol of both Depression hardships and opportunity to start anew.³⁰ “Whereas in earlier periods,” one scholar determines, “the American road had crystallized the democratic opportunities of America’s westward movement, during the Depression writers and photo-journalists converted it into a symbol of human displacement and suffering.”³¹

Complementing independent art of the period, the New Deal allowed the government to interpret and define regional and national character, and the centerpiece of this cultural exploration was the highway. In April 1935, Franklin D. Roosevelt signed an Executive Order that established the Works Progress Administration (renamed the Work Projects Administration in 1939). The WPA included many diverse projects to boost employment, yet it is best remembered for the Federal Writers’ Project (FWP), which was a national project for the arts to “hold up a mirror to America.” The FWP included four main programs: the writers’ project, the theatre project, the music project, and the arts project. Together, the FWP represented “the largest governmental intervention into cultural production in the history of the United States.”³²

The FWP used the highways to define American national and regional identity. Led by Henry Alsberg, the Federal Writers’ Project produced approximately 400 books

³⁰ Charles C. Alexander, *Here the Country Lies: Nationalism and the Arts in Twentieth-Century America* (Bloomington, Ind: Indiana University Press, 1980).

³¹ Christine Bold, *The WPA Guides: Mapping America* (Jackson: University Press of Mississippi, 1999), 76.

³² Bold, *WPA Guides*, xiii.

and guides that helped American authors define and articulate their cultural identity and experience. The greatest legacy of Alsberg's FWP remains the *American Guide* series, which was a series of guidebooks on all 48 states, Alaska, Washington, D.C., and some state and city guides. This project took the form of guidebooks for three main reasons. First, on a pragmatic level, the guidebook project could employ individuals with varied talents from relief rolls across the nation "for whom it was often difficult for WPA officials to find suitable work."³³ The FWP provided work for writers, secretaries, librarians, geographers, and folklorists. Second, the guides reinforced narratives of citizenship that the government propagated. "The WPA volumes," one historian notes, "were floated as guidelines to cultural citizenship in modern America"³⁴ Lastly, the guidebooks allowed the government to compile a complete picture of America, reinforcing notions of national exceptionalism. WPA leader Harry Hopkins believed the FWP achieved the New Deal's "ambitious objective of presenting to the American people a portrait of America, its history, folklore, scenery, cultural backgrounds, social and economic trends, and racial factors."³⁵

The structure of the guide project used the precedent of a federal-state cooperative model, with federal leaders maintaining significant editorial oversight and authority. The series had a national office in Washington, D.C. with editors and directors who created and enforced national standards, ensuring the guidebooks were relatively similar in structure and content. One national employee remarked: "We will have to

³³ Jerrold Hirsch, *Portrait of America: A Cultural History of the Federal Writers' Project* (Chapel Hill: University of North Carolina Press, 2003), 35.

³⁴ Bold, *WPA Guides*, 18. On the government propagated New Deal cultural and civic narratives, see: Allen, *Forgotten Men and Fallen Women*.

³⁵ Quoted in: David M. Wrobel, *Global West, American Frontier: Travel, Empire, and Exceptionalism from Manifest Destiny to the Great Depression* (Albuquerque: University of New Mexico Press, 2013), 142.

gradually discipline all State Directors in the precise method and literary treatment which we demand for the Federal work.”³⁶ Because the federal government took responsibility for these guides, the national editors maintained a strict editorial process that ensured uniformity, accuracy, and results. In total, the national editors sent out 18 manuals to state offices, including a fifty-five-page manual with instructions for writers and editors.³⁷ The guides opened with essays on the state and general information and history, then they went into information on cities and towns in the state, and they closed with automobile tours throughout the state. These automobile tours took up over half of most volumes, and they show how the government used its highways to define regional and national identity.

The leader of the national tour program, Katherine Kellock, imposed her ideals on the tours: she instructed the authors to present the tours as a narrative of history in which progress always continued. Kellock directed her staff: “Thus the tour route is often a thread on which a narrative can be built, with history from the days of Indian occupation of the country to the present, told in geographical rather than topical or chronological sequence. The *social, economic, cultural* and *political* histories of towns along routes are related to the history of the route itself.”³⁸ Her progressive view of history is present in nearly all the state guides, for “Kellock was sending her workers out on the roads to look for evidence of vigor, self-sufficiency, and achievement, in

³⁶ Quoted in: William Francis McDonald, *Federal Relief Administration and the Arts: The Origins and Administrative History of the Arts Projects of the Works Progress Administration*, (Columbus, OH: Ohio State University Press, 1969), 744.

³⁷ Bold, *WPA Guides*, 18.

³⁸ Quoted in: Bold, *WPA Guides*, 66.

other words, evidence of American progress.”³⁹ Beyond the state guides, Katherine Kellock led the efforts to publish three guides wholly dedicated to motor tours.

The national office directed state efforts, and this hierarchy ensured uniformity and effective results on schedule. “This publishing venture was larger in scope than anything ever attempted by any government institution.”⁴⁰ In August 1935, the FWP planned to hire 10,000 workers across the nation with its \$6.2 million budget. Immediately, 3,000 workers joined the FWP, and at its height, it employed over 7,5000 people. These employees produced the *American Guide* series, but they also took a cultural inventory of the nation. Their research, for example, included approximately 10,000 oral interviews. These interviews provide excellent documentation of American history, bringing to life the plight of former slaves, immigrants, pioneers, union activists, Native Americans, and factory workers. FWP workers spread across the nation, documenting American progress. The success of this uniform program relied on a coherent national plan and regular federal oversight, a model pioneered by the BPR’s federal aid system.

While the national hierarchy ensured aesthetic standardization and a degree of content uniformity, the national editors and state workers found a balance. This balance consisted, on one hand, of the promotion of nationalistic pride and unity. On the other hand, a competitive regionalist attitude found a home in each of the state guides. The contemporary reviews of the guides highlight the nationalist contribution. Lewis Mumford, cultural critic and leading intellectual, called the *American Guide* series “the

³⁹ Bold, *WPA Guides*, 69.

⁴⁰ DeMasi, *Henry Alsberg*, 160.

finest contribution to American patriotism that has been made in our generation.”⁴¹ After the final guide was published, President Roosevelt held an “American Guide Week,” during which the series was celebrated. During one event, he claimed: “When every student needs to know what America is and what it stands for, educators everywhere should be aware of the invaluable contribution that has been made by the American guide series.”⁴² The contribution to a coherent national narrative through the guides persisted in American cultural memory. In John Steinbeck’s *Travels with Charley* (1962), he wrote: “If there had been room in Rocinante I would have packed the W.P.A. Guides to the States, all forty-eight volumes of them ... the complete set comprises the most comprehensive account of the United States ever got together, and nothing has approached it. It was compiled during the depression by the best writers in America.”⁴³ One important aspect of painting this American cultural portrait was that the guides separated American culture from that of Europe. The editors intended to declare a new American culture, and “the series was lauded for shaking off European cultural imperialism.”⁴⁴ The editors sought to highlight the cultural diversity of America in the guides, something traditionally overlooked and absent in European culture. “What the FWP helped them rediscover was a pluralistic American culture, not the culture of Anglo-Saxon Americanism or the culture of an emerging race.”⁴⁵

The highway tours, coupled with the essays, allowed the state editors to present a specific narrative of their history, guiding the tourist along what they considered to be

⁴¹ Lewis Mumford, “Writers’ Project,” *New Republic*, Oct. 20, 1937, p. 306.

⁴² Quoted in: Bold, *WPA Guides*, 14.

⁴³ John Steinbeck, *Travels with Charley* (New York: Viking Press, 1962), 134.

⁴⁴ Bold, *WPA Guides*, 8.

⁴⁵ Hirsch, *Portrait of America*, 38.

state highlights. The federal editors sought a complete picture of American life, which included regional peculiarities and cultures. Though each guidebook presents slight variations regarding regional identity, one can make general summaries about the historical narrative presented through the tours of each region. Favoring Confederate and plantation history, for example, the Southern guides reinforced a Lost Cause narrative that took the reader through an ethically-unambiguous narrative that idealized the Old South and took the traveler to many Confederate sites from the “War Between the States.” The South-Western guides highlighted Native American history and culture, epitomized by Oklahoma’s celebration of past heritages led by its editor Angie Debo. The guides to the West celebrated rugged individualism, the outdoors, and a pioneer spirit, bringing the traveler to many sites of frontier settlements, particularly the overland trail and gold rush. The Middle West guides presented a melting-pot America with a long history of European immigration and agricultural dependence, showing off, for example, the varieties of historical windmills and wells with roots in diverse European traditions. The North East guides largely brought the traveler into the settling of the continent and the making of America, claiming a history in which they claimed the roots of Americanism.⁴⁶ The series used the highway as the vehicle to present

⁴⁶ Though the author has attempted to draw conclusions based on historical regions that are covered in nearly 400 guides, these generalizations do not hold up under critical scrutiny. Though the broad contours are relatively consistent throughout the regions, a full picture ought to include local variations and complexities that complicate broader ideals and norms. Even within the West, for example, David Wrobel finds distinct ideological differences and nuances, breaking the FWP’s “South West,” “Middle West,” and “Far West” into four distinct tours: California, Arizona, New Mexico, and Texas; Oklahoma, Kansas, Nebraska, South Dakota, and North Dakota; Montana, Wyoming, Colorado, Utah, Nevada, and Idaho; and Oregon, Washington, and Alaska. The FWP attempted to use five categories for regions, which are followed in this chapter, but the astute scholar can draw many more patterns and connections. See: David M. Wrobel, *Global West, American Frontier: Travel, Empire, and Exceptionalism from Manifest Destiny to the Great Depression* (Albuquerque: University of New Mexico Press, 2013), 1142-180.

traditional American values and the narrative of progress. Indeed, the first director of folklore John Lomax resigned after just over a year “feeling that the spread of roads and the rise of radio already spelled doom to folk music and regional cultures.”⁴⁷ The series succeeded, however, because the guides employed the better roads to highlight the nation’s traditional cultures. This dichotomy of past and present melded together to highlight Katherine Kellock’s belief in a progressive narrative of history, using the automobile to foreshadow future progress.

The federal government’s cooperative efforts with local writers and administrators defined American identity through the nation’s highways. The structure of the highway program was the realization of a process that, through the first decades of the twentieth century, had developed and refined the modern state and its bureaucratic centralized administration. The New Deal relied upon the highways, which relied upon the decades-long process developing the highway bureaucracy. The Great Depression provided the spark that allowed the government to realize the potential of its highway program, and when seen in context, we can see the New Deal state’s seeds germinating through the early twentieth century.

⁴⁷ David A. Taylor, *Soul of a People: The WPA Writers’ Project Uncovers Depression America* (Hoboken, NJ: John Wiley & Sons, Inc., 2009), 18.

Bibliography

Archival Collections

Benson Ford Research Center – Dearborn, MI

- Accession 6: Edsel B. Ford Office Papers

Cushing Memorial Library & Archives – College Station, TX

- Thomas H. MacDonald Papers Collection

National Archives and Records Administration II – College Park, MD

- Record Group 30: Records of the Bureau of Public Roads
- Record Group 59: General Records of the Department of State
- Record Group 129 Records of the Bureau of Prisons
- Record Group 174: General Records of the Department of Labor

National Archives and Records Administration – Washington, D.C.

- Record Group 46: Records of the U.S. Senate
- Record Group 233: Records of the U.S. House of Representatives

Carl Albert Congressional Research and Studies Center – Norman, OK

- Wilburn Cartwright Collection

Colorado State Archives – Denver, CO

- Department of Corrections

Kheel Center for Labor-Management Documentation and Archives – Ithaca, NY

- Collection 5966: National Committee on Prisons and Prison Labor Pamphlets and Leaflets
- Collection 5001 pam: American Association for Labor Legislation Records
- Collection 5918 mf: Minutes of the Executive Council of AFL

Newspapers, Magazines, and Journals

- *Atlanta Daily World*
- *Breeders Gazette*
- *Chicago Daily Tribune*
- *Congressional Record*
- *Denver Post*
- *Good Roads*
- *Good Roads and Convict Labor*
- *International Highway Magazine*
- *Liberty*
- *Los Angeles Times*

- *New Republic*
- *New York Herald Tribune*
- *New York Times*
- *Oregon Journal*
- *Outing*
- *Public Roads*
- *Roads and Streets*
- *Salt Lake Tribune*
- *Southern Good Roads*
- *The Military Engineer*
- *The Senator*
- *Washington Post*

Published Sources

Primary

A Contract With the People: Platform of the Progressive Party Adopted at Its First National Convention. New York: Progressive National Committee, 1912.

American Automobile Association. *Driver and Pedestrian Responsibility.* Washington, D.C.: American Automobile Association, 1936.

———. *Highways Green Book, Second Annual Edition.* Washington, D.C.: Andrew B. Graham Co., 1921.

Byrne, Austin T. *A Treatise on Highway Construction, Designed as a Text-Book and Work of Reference for All Who May Be Engaged in the Location, Construction, or Maintenance of Roads, Streets, and Pavements.* New York: John Wiley & Sons, 1908.

“Convict Labor in 1923.” Bulletin of the U.S. Bureau of Labor Statistics. Washington, D.C.: U.S. Bureau of Labor Statistics, January 1925.

Dole, Elizabeth Hanford, and Ray A. Barnhart. “Highway Statistics 1984.” United States Department of Transportation-Federal Highway Administration, 1984. <https://rosap.ntl.bts.gov/view/dot/8338>.

Drake, J. Walter. *Second Pan American Highway Congress, Rio De Janeiro, August 16 to 28, 1929, Report of the Delegation from the United States of America.* Washington, D.C.: Government Printing Office, 1930.

Eno, William Phelps. *The Story of Highway Traffic Control, 1899-1939.* New York: The Eno Foundation for Highway Traffic Control Inc., 1939.

Federal Writers’ Project of the Works Progress Administration. *The Oregon Trail, The Missouri River to the Pacific Ocean.* New York: Hastings House, 1939.

- Ford, Henry. *Ford's Ideals: Being a Selection from "Mr. Ford's Page" in The Dearborn Independent*. Dearborn, MI: The Dearborn Publishing Company, 1922.
- Grant, Madison. *The Passing of the Great Race; or, The Racial Basis of European History*. New York: Charles Scribner's Sons, 1916.
- Henderson, Charles Richmond. *Outdoor Labor for Convicts, a Report to the Governor of Illinois*. Chicago: The University of Chicago Press, 1907.
- "HIGHWAY ACCIDENTS: Their Causes and Recommendations for Their Preventio." Washington, D.C.: United States Department of Agriculture-Bureau of Public Roads, 1938.
- Irvine, Leigh H. *Golden Roads: The Good Road Is the Golden Road, Abridged Edition*. San Luis Obispo, CA, 1916.
- Lippmann, Walter. *Public Opinion*. New York: Harcourt Brace, 1922.
- Page, Logan Wallace. *Roads Paths and Bridges*. New York: Sturgis & Walton Company, 1912.
- Pan American Union. *Addresses Delivered During the Visit of Herbert Hoover President-Elect of the United States to Central and South America, November-December 1928*. Washington, D.C.: Pan American Union, 1929.
- Pennybacker, J.E., H.S. Fairbanks, and W.F. Draper. "Convict Labor for Road Work." United States Department of Agriculture Bulletin. Washington, D.C.: Government Printing Office, 1916.
- Potter, Isaac B. *The Gospel of Good Roads: A Letter to the American Farmer*. New York: The League of American Wheelmen, 1891.
- Pratt, Joseph Hyde. "Convict Labor in Highway Construction." *The Annals of the American Academy of Political and Social Science* 56 (March 1913).
- Recent Social Trends in the United States: Report of the President's Research Committee on Social Trends, With a Foreword by Herbert Hoover, One Volume Edition*. New York: McGraw-Hill Book Company, Inc., 1933.
- Robinson, Louis Newton. *Penology in the United States*. Philadelphia: The John C. Winston Company, 1922.
- Slosson, William Preston. *The Great Crusade and After, 1914-1928*. New York: The Macmillan Company, 1931.
- State Board of Agriculture. *State Farmers' Institutes Season of 1914-15, Institute Bulletin No. 21*. Agricultural College, MI: State Board of Agriculture, 1915.

- Steinbeck, John. *Grapes of Wrath*. New York: Penguin Books, 1939.
- . *Travels with Charley*. New York: Viking Press, 1962.
- Turner, Frederick Jackson. "Social Forces in American History." *American Historical Review* 16, no. 2 (1910): 217–33.
- Tynan, Thomas J. "Prison Labor on Public Roads." *The Annals of the American Academy of Political and Social Science* 46 (March 1913).
- United States Bureau of Labor Statistics. "CONVICT LABOR FOR ROAD WORK." Monthly Review of the U.S. Bureau of Labor Statistics. Washington, D.C., April 1917.
- United States Department of Agriculture-Bureau of Public Roads. *Highways of History*. Washington, D.C.: U.S. Government Printing Office, 1939.
- Wilmot, Sydney. "Use of Convict Labor for Highway Construction in the North at the Proceedings of the Academy of Political Science in the City of New York." *Good Roads and Convict Labor* 4, no. 2 (January 1914): 6–68.
- Wilson, Mildred A. "Bibliography on Highway Safety." Miscellaneous. Washington, D.C.: Government Printing Office, 1938.
- Wines, Frederick Howard. *Punishment and Reformation, a Study of the Penitentiary System*. New York: Thomas Y. Crowell Company Publishers, 1919.

Secondary

- Adler, J. S. "Less Crime, More Punishment: Violence, Race, and Criminal Justice in Early Twentieth-Century America." *Journal of American History* 102, no. 1 (June 1, 2015): 34–46. <https://doi.org/10.1093/jahist/jav173>.
- Akera, Atsushi, and Bruce Seely. "A Historical Survey of the Structural Changes in the American System of Engineering Education." In *International Perspectives on Engineering Education: Engineering Education and Practice in Context*, edited by Steen Hyldgaard Christensen, Christelle Didier, Andrew Jamison, Martin Meganck, Carl Mitcham, and Byron Newberry, 1:7–32. New York: Springer International Publishing, 2015. <https://doi.org/10.1007/978-3-319-16169-3>.
- Akerman, James R., ed. *Cartographies of Travel and Navigation*. Chicago and London: University of Chicago Press, 2006.
- Akin, William E. *Technocracy and the American Dream: The Technocrat Movement, 1900-1941*. Berkeley: University of California Press, 1977.

- Alexander, Charles C. *Here the Country Lies: Nationalism and the Arts in Twentieth-Century America*. Bloomington, Ind: Indiana University Press, 1980.
- Alexander, Michelle. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: The New Press, 2010.
- Allen, Holly. *Forgotten Men and Fallen Women: The Cultural Politics of New Deal Narratives*. Ithaca and London: Cornell University, 2015.
- Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. New York: Verso, 2006.
- Andrews, Thomas G. *Killing for Coal: America's Deadliest Labor War*. Cambridge, MA: Harvard University Press, 2010.
- Axline, Jon. "Building Permanent and Substantial Roads: Prison Labor on Montana's Highways, 1910-1925." *Montana: The Magazine of Western History* 62, no. 2 (2012): 59–66, 95–96.
- Ayers, Edward L., Patricia Nelson Limerick, Stephen Nissenbaum, and Peter S. Onuf. *All Over the Map: Rethinking American Regions*. Baltimore: The Johns Hopkins University Press, 1996.
- Badger, Anthony J. *The New Deal: The Depression Years, 1933-1940*. New York: Ivan R. Dee, 1989.
- Becker, William, and William McClenahan. *The Market, the State, and the Export-Import Bank of the United States*. New York: Cambridge University Press, 2003.
- Bégin, Camille. *Taste of the Nation: The New Deal Search for America's Food*. Studies in Sensory History. Urbana: University of Illinois Press, 2016.
- Blackhawk, Ned. *Violence Over the Land: Indians and Empires in the Early American West*. Cambridge and London: Harvard University Press, 2006.
- Blackmon, Douglas A. *Slavery by Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II*. New York: Anchor Books, 2008.
- Blight, David W. *Race and Reunion: The Civil War in American Memory*. Cambridge and London: The Belknap Press of Harvard University Press, 2001.
- Blodgett, Peter J., ed. *Motoring West: Automobile Pioneers, 1900-1909*. Norman, Oklahoma: The Arthur H. Clark Company, 2015.
- Blue, Ethan. *Doing Time in the Depression: Everyday Life in Texas and California Prisons*. American History and Culture. New York: New York University Press, 2012.

- Bold, Christine. *The WPA Guides: Mapping America*. Jackson: University Press of Mississippi, 1999.
- Bookspan, Shelley. *A Germ of Goodness: The California State Prison System, 1851-1944*. Law in the American West, v. 3. Lincoln: University of Nebraska Press, 1991.
- Boyer, Paul. *Urban Masses and Moral Order in America, 1820-1920*. Cambridge and London: Harvard University Press, 1978.
- Braumoeller, Bear F. "The Myth of American Isolationism." *Foreign Policy Analysis* 6, no. 4 (September 22, 2010): 349–71. <https://doi.org/10.1111/j.1743-8594.2010.00117.x>.
- Brinkley, Alan. *The End of Reform: New Deal Liberalism in Recession and War*. New York: Vintage Books, 1996.
- Brinkley, Douglas. *Wheels for the World: Henry Ford, His Company, and a Century of Progress, 1903-2003*. New York: Viking, 2003.
- Brosnan, Kathleen A. *Uniting Mountain & Plain: Cities, Law, and Environmental Change along the Front Range*. 1st ed. Albuquerque: University of New Mexico Press, 2002.
- Brundage, W. Fitzhugh. *The Southern Past: A Clash of Race and Memory*. Cambridge and London: The Belknap Press of Harvard University Press, 2005.
- Bu, Liping. *Making the World Like Us: Education, Cultural Expansion, and the American Century*. Perspectives on the Twentieth Century. Westport, Conn: Praeger, 2003.
- Burns, Robert Elliott. *I Am a Fugitive from a Georgia Chain Gang!* Brown Thrasher ed. Athens: University of Georgia Press, 1997.
- Childs, Dennis. *Slaves of the State: Black Incarceration from the Chain Gang to the Penitentiary*. Minneapolis: University of Minnesota Press, 2015.
- Cohn, Julie A. *The Grid: Biography of an American Technology*. Cambridge, Massachusetts: The MIT Press, 2017.
- Conchon, Anne. *La Corvée Des Grands Chemins Au XVIIIe Siècle: Économie d'une Institution*. Rennes: Presses universitaires de Rennes, 2016.
- Cooper, Barbara MacGowan. *Evangelical Christians in the Muslim Sahel*. African Systems of Thought. Bloomington, IN: Indiana University Press, 2006.
- Costigliola, Frank. *Awkward Dominion: American Political, Economic, and Cultural Relations with Europe, 1919-1933*. Ithaca: Cornell University Press, 1988.

- Dal Lago, Enrico. *American Slavery, Atlantic Slavery, and Beyond: The U.S. "Peculiar Institution" in International Perspective*. U.S. History in International Perspective. Boulder, Colo: Paradigm Publishers, 2012.
- Dawley, Alan. *Changing the World: American Progressives in War and Revolution. Politics and Society in Twentieth-Century America*. Princeton, NJ: Princeton Univ. Press, 2003.
- Dearinger, Ryan. *The Filth of Progress: Immigrants, Americans, and the Building of Canals and Railroads in the West*. Oakland, CA: University of California Press, 2016.
- DeConde, Alexander. "Herbert Hoover's Good Will Tour." *The Historian* 12, no. 2 (1950): 167–81.
- DeMasi, Susan Rubenstein. *Henry Alsberg: The Driving Force of the New Deal Federal Writers' Project*. Jefferson, North Carolina: McFarland & Company, Inc., Publishers, 2016.
- Deverell, William. *Railroad Crossing: Californians and the Railroad, 1850-1910*. Berkeley: University of California Press, 1994.
- Dickstein, Morris. *Dancing in the Dark: A Cultural History of the Great Depression*. New York: W.W. Norton & Company, 2010.
- Diner, Steven J. "Linking Politics and People: The Historiography of the Progressive Era." *OAH Magazine of History* 13, no. 3 (1999): 5–9.
- Dochuk, Darren. *From Bible Belt to Sunbelt: Plain-Folk Religion, Grassroots Politics, and the Rise of Evangelical Conservatism*. 1st ed. New York: W.W. Norton, 2011.
- Donald, David Herbert, ed. *Why the North Won the Civil War*. 1. ed. A Touchstone Book. New York: Simon & Schuster, 1996.
- Douglas, Davison M. *Jim Crow Moves North: The Battle over Northern School Segregation, 1865-1954*. Cambridge: Cambridge University Press, 2005.
- Dudziak, Mary L. *Cold War Civil Rights: Race and the Image of American Democracy*. Politics and Society in Twentieth-Century America. Princeton, NJ: Princeton Univ. Press, 2011.
- Dumenil, Lynn. *The Modern Temper: American Culture and Society in the 1920s*. 1. ed., 4. print. New York: Hill and Wang, 1999.
- . *The Second Line of Defense: American Women and World War I*. Chapel Hill: The University of North Carolina Press, 2017.

- Edwards, Jason A. "An Exceptional Debate: The Championing of and Challenge to American Exceptionalism." *Rhetoric and Public Affairs* 15, no. 2 (2012): 351–67.
- Edwards, Rebecca. *New Spirits: Americans in the "Gilded Age," 1865-1905*. 2nd ed. New York: Oxford University Press, 2011.
- . "Politics, Social Movements, and the Periodization of the U.S. History." *The Journal of the Gilded Age and Progressive Era* 8, no. 4 (October 2009): 463–73.
- Ekbladh, David. "'Mr. TVA': Grass-Roots Development, David Lilienthal, and the Rise and Fall of the Tennessee Valley Authority as a Symbol for U.S. Overseas Development, 1933-1973." *Diplomatic History* 26, no. 3 (July 2002): 335–74. <https://doi.org/10.1111/1467-7709.00315>.
- . *The Great American Mission: Modernization and the Construction of an American World Order*. America in the World. Princeton, NJ: Princeton Univ. Press, 2010.
- Engs, Ruth C. *Clean Living Movements: American Cycles of Health Reform*. Westport, Conn: Praeger Publishers, 2000.
- . "Resurgence of a New 'Clean Living' Movement in the United States." *Journal of School Health* 61, no. 4 (April 1991).
- Evans, Peter B., Dietrich Rueschemeyer, and Theda Skocpol, eds. *Bringing the State Back In*. Cambridge [Cambridgeshire] ; New York: Cambridge University Press, 1985.
- Fenn, Elizabeth A. *Encounters at the Heart of the World: A History of the Mandan People*. New York: Hill and Wang, 2014.
- Ficek, Rosa E. "Imperial Routes, National Networks and Regional Projects in the Pan-American Highway, 1884–1977." *The Journal of Transport History* 37, no. 2 (December 2016): 129–54. <https://doi.org/10.1177/0022526616654699>.
- Fiege, Mark. *Irrigated Eden: The Making of an Agricultural Landscape in the American West*. Seattle: University of Washington Press, 2000.
- Fielding, Raymond. *The March of Time 1935-1951*. New York: Oxford University Press, 1978.
- Fierce, Mildred C. *Slavery Revisited: Blacks and the Southern Convict Lease System, 1865-1933*. Brooklyn: Africana Studies Research Center, 1994.
- Foner, Eric. *Nothing but Freedom: Emancipation and Its Legacy*. Baton Rouge, LA: LSU Press, 2007.

- Frederickson, Kari A. *The Dixiecrat Revolt and the End of the Solid South, 1932-1968*. Chapel Hill: University of North Carolina Press, 2001.
- Gabaccia, Donna R. *We Are What We Eat: Ethnic Food and the Making of Americans*. Cambridge, Mass: Harvard University Press, 1998.
- Gienow-Hecht, Jessica C. E. "Shame on U.S.? Academics, Cultural Transfer, and the Cold War: A Critical Review." *Diplomatic History* 24, no. 3 (July 2000): 465–94. <https://doi.org/10.1111/0145-2096.00227>.
- Gorman, Tessa M. "Back on the Chain Gang: Why the Eighth Amendment and the History of Slavery Proscribe the Resurgence of Chain Gangs." *California Law Review* 85, no. 2 (1997): 441–441.
- Grandin, Greg. *Fordlandia: The Rise and Fall of Henry Ford's Forgotten Jungle City*. New York: Picador, 2009.
- Grant, Nancy. *TVA and Black Americans: Planning for the Status Quo*. Philadelphia: Temple University Press, 1990.
- Greene, Jack P. *The Intellectual Construction of America: Exceptionalism and Identity from 1492 to 1800*. Chapel Hill, NC: Univ. of North Carolina Press, 1993.
- Hague, Euan. "More Imagined Than Real: The Jefferson Davis Highway." *SCA Journal* 28 (2010): 14–19.
- Haley, Sarah. *No Mercy Here: Gender, Punishment, and the Making of Jim Crow Modernity*. Chapel Hill: University of North Carolina Press, 2016.
- Haller, John S. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859-1900*. Carbondale: Southern Illinois University Press, 1995.
- Hawley, Ellis W. *The Great War and the Search for a Modern Order: A History of the American People and Their Institutions, 1917-1933*. 2nd ed. Prospect Heights, IL: Waveland Press, Inc., 1992.
- Hays, Samuel. *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920*. Pittsburgh: University of Pittsburgh Press, 1959.
- Henry, Lyell D. *The Jefferson Highway: Blazing the Way from Winnipeg to New Orleans*. Iowa City: University of Iowa Press, 2016.
- Herbst, Jurgen. *The Once and Future School: Three Hundred and Fifty Years of American Secondary Education*. New York: Routledge, 1996.

- Hernandez, Kelly Lytle. *City of Inmates: Conquest, Rebellion, and the Rise of Human Caging in Los Angeles, 1771-19656*. Chapel Hill: University of North Carolina Press, 2017.
- Hirsch, Jerrold. *Portrait of America: A Cultural History of the Federal Writers' Project*. Chapel Hill: University of North Carolina Press, 2003.
- Hofstadter, Richard. *Anti-Intellectualism in American Life*. New York: Vintage Books, 1962.
- Holley, Jr., I.B. *The Highway Revolution, 1895-1925: How the United States Got Out of the Mud*. Durham, North Carolina: Carolina Academic Press, 2008.
- Horowitz, Tony. *Confederates in the Attic: Dispatches from the Unfinished Civil War*. New York: Vintage Books, 1999.
- Howe, Daniel Walker. *What Hath God Wrought: The Transformation of America, 1815 - 1848*. The Oxford History of the United States, David M. Kennedy, general ed.; [Vol. 5]. Oxford: Oxford Univ. Press, 2007.
- Hyde, Anne F. *An American Vision: Far Western Landscape and National Culture, 1820-1920*. New York and London: New York University Press, 1990.
- Ingram, Tammy. *Dixie Highway: Road Building and the Making of the Modern South, 1900-1930*. Chapel Hill: University of North Carolina Press, 2014.
- Issenberg, Andrew C., and Thomas Richards, Jr. "Alternative Wests: Rethinking Manifest Destiny." *Pacific Historical Review* 86, no. 1 (2017): 4–17.
- Jacobs, Margaret D. *White Mother to a Dark Race: Settler Colonialism, Maternalism, and the Removal of Indigenous Children in the American West and Australia, 1880-1940*. Lincoln and London: University of Nebraska Press, 2009.
- Jacobson, Matthew Frye. *Whiteness of a Different Color: European Immigrants and the Alchemy of Race*. 6. print. Cambridge, Mass.: Harvard Univ. Press, 2002.
- Jacoby, Karl. *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation*. Berkeley, Los Angeles, and London: University of California Press, 2001.
- Jakle, John A. "Pioneer Roads: America's Early Twentieth-Century Named Highways." *Material Culture* 32, no. 2 (2000): 1–22.
- Jakle, John A. *The Tourist: Travel in Twentieth-Century North America*. Lincoln: University of Nebraska Press, 1985.
- Jakle, John A., and Keith A. Sculle. *Motoring: The Highway Experience in America*. Athens and London: University of Georgia Press, 2008.

- Jeansonne, Glen. *The Life of Herbert Hoover: Fighting Quaker, 1928–1933*. New York: Palgrave Macmillan, 2012.
- Johnson, David K. *The Lavender Scare: The Cold War Persecution of Gays and Lesbians in the Federal Government*. Chicago: University of Chicago Press, 2004.
- Jordan, Benjamin René. *Modern Manhood and the Boy Scouts of America: Citizenship, Race, and the Environment, 1910-1930*. Chapel Hill: University of North Carolina Press, 2016.
- Kammen, Michael. *Mystic Chords of Memory: The Transformation of Tradition in American Culture*. New York: Alfred A. Knopf, Inc., 1991.
- Kanigel, Robert. *The One Best Way: Frederick Winslow Taylor and the Enigma of Efficiency*. Cambridge: The MIT Press, 1997.
- Katznelson, Ira. *Fear Itself: The New Deal and the Origins of Our Time*. First Edition. New York: Liveright Publishing Corporation, 2013.
- Kazin, Michael. *American Dreamers: How the Left Changed a Nation*. New York: Alfred A. Knopf, Inc., 2011.
- Kennedy, David M. *Freedom From Fear: The American People in Depression and War, 1929-1945*. New York: Oxford University Press, 1999.
- . *Over Here: The First World War and American Society*. New York: Oxford University Press, 1980.
- Kirby, John B. *Black Americans in the Roosevelt Era: Liberalism and Race*. Paper ed., 2. print. Twentieth-Century America Series. Knoxville: Univ. of Tennessee Press, 1992.
- Klein, Kerwin Lee. *Frontiers of Historical Imagination: Narrating the European Conquest of Native America, 1890 - 1990*. 1. paperback print. Berkeley, Calif.: Univ. of California Press, 1999.
- Kramer, Paul A. *The Blood of Government: Race, Empire, the United States, & the Philippines*. Chapel Hill: University of North Carolina Press, 2006.
- Kramer, Paul A. "Power and Connection: Imperial Histories of the United States in the World." *The American Historical Review* 116, no. 5 (December 2011): 1348–91. <https://doi.org/10.1086/ahr.116.5.1348>.
- LaCroix, Alison L. *The Ideological Origins of American Federalism*. Cambridge, Mass: Harvard Univ Press, 2010.

- Ladd, Brian. *Autophobia: Love and Hate in the Automotive Age*. Chicago: University of Chicago Press, 2008.
- Lears, Jackson. *Fables of Abundance: A Cultural History of Advertising in America*. New York: Basic Books, 1994.
- Lefebvre, Henri. *The Production of Space*. Translated by Donald Nicholson-Smith. Cambridge: Cambridge University Press, 1991.
- Leffler, Melvyn P. *A Preponderance of Power: National Security, the Truman Administration, and the Cold War*. Stanford, CA: Stanford University Press, 1992.
- Leuchtenburg, William E. *The White House Looks South: Franklin D. Roosevelt, Harry S. Truman, Lyndon B. Johnson*. Baton Rouge: LSU Press, 2007.
- Leverenz, David. *Manhood and the American Renaissance*. Ithaca: Cornell University Press, 1989.
- Lewis, Tom. *Divided Highways: Buildign the Interstate Highways, Transforming American Life*. Ithaca and London: Cornell University Press, 2013.
- Libbey, James K. *Alben Barkley: A Life in Politics*. Lexington: The University Press of Kentucky, 2016.
- Lichtenstein, Alex. *Twice the Work of Free Labor: The Political Economy of Convict Labor in the New South*. New York: Verso, 1996.
- Lipset, Seymour Martin. *American Exceptionalism: A Double-Edged Sword*. 1. publ. in paperback. New York: Norton, 1997.
- Long, Lucy M., ed. *Culinary Tourism. Material Worlds*. Lexington: University Press of Kentucky, 2004.
- Maher, Neil M. *Nature's New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement*. New York: Oxford University Press, 2008.
- Mancini, Matthew J. *One Dies, Get Another: Convict Leasing in the American South, 1866-1928*. Columbia, South Carolina: University of South Carolina Press, 1996.
- Maxwell, David. *African Gifts of the Spirit: Pentecostalism & the Rise of a Zimbabwean Transnational Religious Movement*. Athens, OH: Ohio University Press, 2006.
- McDonald, William Francis. *Federal Relief Administration and the Arts: The Origins and Administrative History of the Arts Projects of the Works Progress Administration*. Columbus, OH: Ohio State University Press, 1969.

- McGerr, Michael. *A Fierce Discontent: The Rise and Fall of the Progressive Movement in America, 1870-1920*. New York: Free Press, 2003.
- McGirr, Lisa. *The War on Alcohol: Prohibition and the Rise of the American State*. First Edition. New York: W.W. Norton & Company, 2016.
- McLennan, Rebecca M. *The Crisis of Imprisonment: Protest, Politics, and the Making of the American Penal State, 1776-1941*. Cambridge: Cambridge University Press, 2008.
- Meyer, Stephen. *Manhood on the Line: Working-Class Masculinities in the American Heartland*. Urbana: University of Illinois Press, 2016.
- Montgomery, David. *Citizen Worker: The Experience of Workers in the United States with Democracy and the Free Market during the Nineteenth Century*. Digital print. Cambridge: Cambridge University Press, 2002.
- “Motor Vehicle Traffic Fatalities, 1900-2007, National Summary.” Washington, D.C.: United States Department of Agriculture Federal Highway Administration Office of Highway Policy Information, January 2009.
<https://www.fhwa.dot.gov/policyinformation/statistics/2007/pdf/fi200.pdf>.
- Nash, Roderick Frazier. *The Nervous Generation: American Thought, 1917-1930*. New York: Rand McNally, 1970.
- Neelley, Jr., Ewing Edward. “Alben W. Barkley: The Image of the Southern Political Orator,” 1987.
- Ngai, Mae M. *Impossible Subjects: Illegal Aliens and the Making of Modern America*. Princeton and Oxford: Princeton University Press, 2004.
- Nugent, Walter T. K. *Into the West: The Story of Its People*. 1. Vintage Books ed. New York: Vintage Books, 2001.
- Oakes, James. *The Scorpion's Sting: Antislavery and the Coming of the Civil War*. First edition. New York: W. W. Norton & Company, Inc, 2014.
- O'Brien, William E. *Landscapes of Exclusion: State Parks and Jim Crow in the American South*. Amherst and Boston: University of Massachusetts Press, 2016.
- Onuf, Peter S. “American Exceptionalism and National Identity.” *American Political Thought* 1, no. 1 (2012): 77–100.
- Oshinsky, David M. “Worse Than Slavery”: *Parchman Farm and the Ordeal of Jim Crow Justice*. 1. ed. New York: Free Press, 1997.
- Palmer, Niall A. *The Twenties in America: Politics and History*. BAAS Paperbacks. Edinburgh: Edinburgh University Press, 2006.

- Palmer, Phyllis. "Outside the Law: Agriculture Workers Under the Fair Labor Standards Act." *Journal of Policy History* 4, no. 4 (October 1995): 416–40.
- Pérez, Louis A. *The War of 1898: The United States and Cuba in History and Historiography*. Chapel Hill: University of North Carolina Press, 1998.
- Perkinson, Robert. *Texas Tough: The Rise of America's Prison Empire*. New York: Metropolitan Books, 2010.
- Pierce, Virgil Caleb. "Utah's First Convict Labor Camp." *Utah Historical Quarterly* 42 (Summer 1974).
- Powell, Miles A. *Vanishing America: Species Extinction, Racial Peril, and the Origins of Conservation*. Cambridge, Massachusetts: Harvard University Press, 2016.
- Preston, Howard Lawrence. *Dirt Roads to Dixie: Accessibility and Modernization in the South, 1885-1935*. Knoxville: University of Tennessee Press, 1991.
- Robbins, William G. *Colony & Empire: The Capitalist Transformation of the American West*. Lawrence: University Press of Kansas, 1994.
- Rockman, Seth. *Scraping By: Wage Labor, Slavery, and Survival in Early Baltimore*. Baltimore, MD: The Johns Hopkins University Press, 2009.
- Rodgers, Daniel T. *Atlantic Crossings: Social Politics in a Progressive Age*. Cambridge and London: The Belknap Press of Harvard University Press, 1998.
- . *Franklin D. Roosevelt: Road to the New Deal, 1882-1939*. Urbana: University of Illinois Press, 2015.
- Roediger, David R. *The Wages of Whiteness: Race and the Making of the American Working Class*. Rev. ed. Haymarket Series. London ; New York: Verso, 2007.
- Rosen, Elliot A. *Roosevelt, The Great Depression, and The Economics of Recovery*. Charlottesville, Va: University of Virginia Press, 2005.
- Rosenberg, Emily S. *Spreading the American Dream: American Economic and Cultural Expansion, 1890-1945*. Edited by Eric Foner. 1st ed. American Century Series. New York: Hill and Wang, 1982.
- Rothman, Hal K. *Devil's Bargains: Tourism in the Twentieth-Century American West*. Lawrence: University Press of Kansas, 1998.
- Sackman, Douglas Cazaux. *Wild Men: Ishi and Kroeber in the Wilderness of Modern America*. New York and Oxford: Oxford University Press, 2010.

- Saler, Bethel. *The Settlers Empire: Colonialism and State Formation in America's Old Northwest*. Philadelphia: University of Pennsylvania Press, 2015.
- Salmond, John A. *The Civilian Conservation Corps, 1933-1942*. Durham, North Carolina: Duke University Press, 1967.
- Sanders, M. Elizabeth. *Roots of Reform: Farmers, Workers, and the American State, 1877-1917*. American Politics and Political Economy. Chicago: University of Chicago Press, 1999.
- Scarfi, Juan Pablo. "In the Name of the Americas: The Pan-American Redefinition of the Monroe Doctrine and the Emerging Language of American International Law in the Western Hemisphere, 1898-1933." *Diplomatic History* 40, no. 2 (April 2016): 189–218. <https://doi.org/10.1093/dh/dhu071>.
- Schaffer, Ronald. *America in the Great War: The Rise of the War Welfare State*. New York: Oxford Univ. Press, 1991.
- Schiesl, Martin J. *The Politics of Efficiency, Municipal Administration and Reform in America: 1880-1920*. Berkeley: University of California Press, 1977.
- Schivelbusch, Wolfgang. *Three New Deals: Reflections on Roosevelt's America, Mussolini's Italy, and Hitler's Germany, 1933-1939*. Translated by Jefferson Chase. 1st ed. New York: Metropolitan Books, 2006.
- Schoultz, Lars. *Beneath the United States: A History of U.S. Policy Toward Latin America*. Cambridge, Mass: Harvard University Press, 1998.
- Scott, James C. *Seeing Like A State: How Certain Schemes to Improve the Human Condition Have Failed*. Nachdr. Yale Agrarian Studies. New Haven, Conn.: Yale Univ. Press, 2008.
- Seely, Bruce E. *Building the American Highway System: Engineers as Policy Makers*. Philadelphia: Temple University Press, 1987.
- . "Engineers and Government-Business Cooperation: Highway Standards and the Bureau of Public Roads, 1900-1940." *The Business History Review* 58, no. 1 (1984): 51–77.
- Seely, Bruce E. "The Scientific Mystique in Engineering: Highway Research at the Bureau of Public Roads, 1918-1940." *Technology and Culture* 25, no. 4 (1984): 798–831.
- Shaffer, Marguerite S. *See America First: Tourism and National Identity, 1880-1940*. Washington and London: Smithsonian Institution Press, 2001.

- Sitkoff, Harvard. *A New Deal for Blacks: The Emergence of Civil Rights as a National Issue: The Depression Decade, 30th Anniversary Edition*. New York: Oxford University Press, 2009.
- Sklaroff, Lauren Rebecca. *Black Culture and the New Deal The Quest for Civil Rights in the Roosevelt Era*. Chapel Hill: University of North Carolina Press, 2009.
- Skowronek, Stephen. *Building a New American State: The Expansion of National Administrative Capacities, 1877-1920*. Cambridge: Cambridge University Press, 1982.
- Smith, Jason Scott. *A Concise History of the New Deal*. Cambridge Essential Histories. New York, NY: Cambridge University Press, 2014.
- . *Building New Deal Liberalism: The Political Economy of Public Works, 1933-1956*. Cambridge: Cambridge University Press, 2006.
- Smith-Howard, Kendra. *Pure and Modern Milk: An Environmental History Since 1900*. Oxford ; New York: Oxford University Press, 2014.
- Snyder, Christina. *Slavery in Indian Country: The Changing Face of Captivity in Early America*. Cambridge and London: Harvard University Press, 2010.
- Söderlind, Sylvia, and James Taylor Carson, eds. *American Exceptionalisms: From Winthrop to Winfrey*. Albany: State University of New York, 2011.
- Sparrow, James T. *Warfare State: World War II Americans and the Age of Big Government*. Oxford ; New York: Oxford University Press, 2011.
- Spiro, Jonathan Peter. *Defending the Master Race: Conservation, Eugenics, and the Legacy of Madison Grant*. Burlington, VT: University of Vermont Press, 2009.
- Stern, Alexandra. *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America*. American Crossroads 17. Berkeley: University of California Press, 2005.
- Strom, Claire. *Making Catfish Bait out of Government Boys: The Fight Against Cattle Ticks and the Transformation of the Yeoman South*. Athens, Ga. ; London: University of Georgia Press, 2010.
- Stromquist, Shelton. *Reinventing "The People": The Progressive Movement, The Class Problem, and The Origins of Modern Liberalism*. Urbana and Chicago: University of Illinois Press, 2006.
- Sturges, Mark. "Enclosing the Commons: Thomas Jefferson, Agrarian Independence, and Early American Land Policy, 1774–1789." *The Virginia Magazine of History and Biography* 119, no. 1 (2011): 42–74.

- Sugrue, Thomas J. "Driving While Black: The Car and Race Relations in Modern America." *Automobile in American Life and Society* (blog). Accessed December 21, 2017. , http://www.autolife.umd.umich.edu/Race/R_Casestudy/R_Casestudy2.htm.
- Sutter, Paul S. *Driven Wild: How the Fight Against Automobiles Launched the Modern Wilderness Movement*. Seattle and London: University of Washington Press, 2002.
- Taylor, David A. *Soul of a People: The WPA Writer's Project Uncovers Depression America*. Hoboken, N.J.: Wiley, 2009.
- Thompson, Heather Ann. "Why Mass Incarceration Matters: Rethinking Crisis, Decline, and Transformation in Postwar American History." *Journal of American History* 97, no. 3 (2010): 703–34.
- Trachtenberg, Alan. *The Incorporation of America: Culture and Society in the Gilded Age*. New York: Hill and Wang, 1982.
- Turner, Frederick Jackson, and John Mack Faragher. *Rereading Frederick Jackson Turner: "The Significance of the Frontier in American History", and Other Essays*. New Haven, Conn: Yale University Press, 1998.
- Tyrrell, Ian. "American Exceptionalism in an Age of International History." *The American Historical Review* 96, no. 4 (1991): 1031–55.
- . *Crisis of a Wasteful Nation: Empire and Conservation in Theodore Roosevelt's America*. Chicago and London: University of Chicago Press, 2015.
- Urofsky, Melvin I. "State Courts and Protective Legislation during the Progressive Era: A Reevaluation." *The Journal of American History* 72, no. 1 (1985): 63–91.
- Wells, Christopher W. *Car Country: An Environmental History*. Seattle and London: University of Washington Press, 2012.
- White, Richard. *Railroaded: The Transcontinentals and the Making of Modern America*. New York and London: W.W. Norton & Company, 2011.
- . *The Organic Machine: The Remaking of the Columbia River*. A Critical Issue. New York: Hill and Wang, 1995.
- . *The Republic For Which It Stands: The United States During Reconstruction and Teh Gilded Age, 1865-1896*. New York: Oxford University Press, 2017.
- Whitmore, Mark. "Transport And Supply During The First World War." *Imperial War Museums*. Accessed November 8, 2017. Transport And Supply During The First World War.

- Wiebe, Robert H. *The Search For Order, 1877-1920*. New York: Hill and Wang, 1967.
- Williams, William Appleman. "The Frontier Thesis and American Foreign Policy." *Pacific Historical Review* 24, no. 4 (November 1955): 379–95. <https://doi.org/10.2307/3635322>.
- Worster, Donald. *Dust Bowl: The Southern Plains in the 1930s*. 25th anniversary ed. New York: Oxford University Press, 2004.
- . *Rivers of Empire: Water, Aridity, and the Growth of the American West*. Oxford: Oxford Univ. Press, 1992.
- Wrobel, David M. *America's West: A History, 1890–1950*. 1st ed. Cambridge: Cambridge University Press, 2017. <https://doi.org/10.1017/9781139022439>.
- . *Global West, American Frontier: Travel, Empire, and Exceptionalism from Manifest Destiny to the Great Depression*. Albuquerque: University of New Mexico Press, 2013.
- . *Promised Lands: Promotion, Memory, and the Creation of the American West*. Lawrence: University Press of Kansas, 2002.
- . *The End of American Exceptionalism: Frontier Anxiety from the Old West to the New Deal*. Lawrence: University Press of Kansas, 1993.
- Zieger, Robert H. *America's Great War: World War I and the American Experience*. Lanham, MD: Rowman & Littlefield Publishers, 2001.
- Zimring, Carl A. *Clean and White: A History of Environmental Racism in the United States*. New York: New York University Press, 2015.