

Imperial Infrastructures: Narratives of Early Railroad Development in the U.S. and China

Edna Wan
East Asian Studies, Faculty of Arts
McGill University, Montreal
August 2022

A thesis submitted to McGill University in partial fulfillment of the requirements of the degree
of Master of Arts

© Edna Wan 2022

CONTENTS

Abstract	1
Précis	2
Acknowledgments	3
Introduction	4
Chapter One – Railroad Development in a Global Context	18
Chapter Two – Mapping the Transcontinental Railroad Across the Pacific	33
Chapter Three – Desiring Nation, Designing Infrastructures: China’s Early Railroad Development	60
Conclusion	90
Bibliography	98

ABSTRACT

This thesis examines how modern infrastructures operate as narrative vehicles for the nation-state by exploring 19th and 20th century railroad projects in the U.S. and China. While railroads facilitate the movement of goods, people, capital, and knowledges within national boundaries, and serve as the material form through which disparate peoples are unified as national subjects, I show how national infrastructures are intimately entangled with forces extraneous to the nation. In tracing the global connections undergirding national railway projects, I suggest that these connections have been disavowed in national historiographies not only as a means through which the nation-state appears as a coherent subject of history, but also obfuscates the ways in which railroads function as infrastructures of imperialism. As my study argues, nationalism emerging out of anti-colonial contexts were deeply informed by imperial expansion fantasies, and charting the development of railroad infrastructure projects helps clarifies this. To analyse the relationship between railroad infrastructure and national narratives, my first chapter provides a historical overview of railroad development in a global context, showing how railroad development shaped the historical configuration of the modern nation-state. Chapter two focuses on the construction of the Transcontinental Railroad, which has been largely celebrated in U.S. historiography in national terms and spotlights the railroad's ties to China. Situating the Transcontinental's construction in the longer genealogy of America's earliest encounters with China in the post-Revolutionary period, I show how America's romance of the East propelled 19th century U.S. westward expansion and the construction of the transcontinental railways, to argue that China served as a critical setting in the making of American identity. Chapter three elaborates upon the Transcontinental's ties to China and examines railway development in China by looking at the Xinning Railway, one of the first railways financed by private Chinese capital and built by Chinese labourers in the early 20th century. Through a close-reading of letters, diaries, and journals written by American and Chinese railroad visionaries, my analysis traces recurring tropes and metaphors to consider the ways in which infrastructures are not only informed by politics, but productive of political subjectivities.

PRÉCIS

Cette thèse examine comment les infrastructures modernes fonctionnent comme des véhicules narratifs pour l'État-nation en explorant les projets ferroviaires des XIXe et XXe siècles aux États-Unis et en Chine. Alors que les chemins de fer facilitent la circulation des biens, des personnes, des capitaux et des connaissances à l'intérieur des frontières nationales, et servent de forme matérielle par laquelle des peuples disparates sont unifiés en tant que sujets nationaux, je montre comment les infrastructures nationales sont intimement liées à des forces étrangères à la nation. En retraçant les connexions mondiales qui sous-tendent les projets ferroviaires nationaux, je suggère que ces connexions ont été désavouées dans les historiographies nationales non seulement comme un moyen par lequel l'État-nation apparaît comme un sujet cohérent de l'histoire, mais aussi comme un moyen d'obscurcir les façons dont les chemins de fer fonctionnent comme des infrastructures de l'impérialisme. Comme le montre mon étude, le nationalisme émergeant des contextes anticoloniaux était profondément influencé par les fantasmes d'expansion impériale, et le fait de suivre le développement des projets d'infrastructure ferroviaire permet de clarifier ce point. Pour analyser la relation entre l'infrastructure ferroviaire et les récits nationaux, mon premier chapitre donne un aperçu historique du développement des chemins de fer dans un contexte mondial, montrant comment le développement des chemins de fer a façonné la configuration historique de l'État-nation moderne. Le deuxième chapitre se concentre sur la construction du chemin de fer transcontinental, qui a été largement célébré en termes nationaux dans l'historiographie américaine, et met en lumière les liens du chemin de fer avec la Chine. En situant la construction du Transcontinental dans la généalogie plus longue des premières rencontres de l'Amérique avec la Chine au cours de la période post-révolutionnaire, je montre comment la romance de l'Amérique pour l'Orient a propulsé l'expansion vers l'ouest des États-Unis au XIXe siècle et la construction des chemins de fer transcontinentaux, pour faire valoir que la Chine a servi de cadre critique dans la construction de l'identité américaine. Le troisième chapitre examine le développement des chemins de fer en Chine, en se penchant sur le chemin de fer de Xinning, l'un des premiers chemins de fer financés par des capitaux privés chinois et construits par des ouvriers chinois au début du XXe siècle. Grâce à une lecture attentive des lettres, des journaux intimes et des journaux écrits par les visionnaires américains et chinois du chemin de fer, mon analyse retrace les tropes et les métaphores récurrentes afin d'examiner les façons dont les infrastructures sont non seulement informées par la politique, mais aussi productives de subjectivités politiques.

ACKNOWLEDGMENTS

In many ways, school has never come easily to me, and it is only because of the kind support from teachers, friends, and family over the last seven years that I have been able to complete this project. First, I would like to begin by expressing my sincerest gratitude to my supervisor, Gal Gvili, who so graciously offered me a chance to pursue academic study in the first place. Her unbridled patience, guidance, and discerning critique over the years has taught me what it means to learn, and with humility, relearn, revise, and rethink.

I am also indebted to all my professors at McGill University. It is a mark of great pride to consider myself a fortunate student of Sandeep Banerjee, Yuriko Furuhashi, Laura Madokoro, Monica Popescu, Richard Jean So, Jeremy Tai, and countless others who have shaped my understanding of the world. Your classes have fomented what I can only describe as genuine intellectual curiosity, and have challenged and inspired me in equal measure. Thank you to Kimberly Chung for her thoughtful and inciteful commentary.

I would also like to thank the Department of East Asian Studies and the Social Science and Humanities Research Council for funding my thesis. Special thanks to all the wonderful staff at Sherbrooke 688: Lynda Bastian, Sarah Curci, Wenrui Duan, and Victor Obidju who have made navigating McGill's administration easier.

I am endlessly thankful for Anya Kowalchuk and Nicholas Pineau, who have not only made the last two years bearable, but have also made our home a wonderful place to return to. I would also like to thank all my friends here and elsewhere: Sarah Abdelshamy, Ryan Angrove, Chen Hsuan, Thomas Christinck, Weiyu Dang, Nicholas Fortna, Lisa Gal, Madeleine Lavallée-Gordon, Robyn Lee, Lin Wei-lin, Lin Pei-yin, Adam McPherson, Eleanor Musick, Jackson Palmer, Przemek Piwek, Amy Song, Jacqueline Taylor, Maia Wyman, Makoto Wakabayashi, and others as well. Thank you for caring for me and making my life outside of school fulfilling.

Lastly, words cannot describe how eternally grateful I am for all the love and encouragement my mother, father, and brother, have given me over the years and the countless sacrifices they have made on my behalf. Thank you for everything.

INTRODUCTION

To the men who run the railways of the country, whether they be managers or operative employees, let me say that the railways are the arteries of the nation's life, and that upon them rests the immense responsibility of seeing to it that these arteries suffer no obstruction of any kind, no inefficiency or slackened power.

— Woodrow Wilson (1917)



Figure 1. *East and West Shaking Hands at Laying of Last Rail*. Photograph by Arthur J. Russell, May 10, 1869. Photographs taken during construction of the Union Pacific Railroad Collection, Beinecke Rare Book and Manuscript Library, New Haven, Connecticut.
<https://collections.library.yale.edu/catalog/2014909>.

Leland Stanford's ceremonial hammering of the golden spike at Promontory Summit, Utah, marked the symbolic completion of the first Transcontinental Railroad on May 10th, 1869, an enterprise that has endured in the U.S. imagination throughout history (fig. 1). In *The Sunset Land: or, The Great Pacific Slope* (1869), Reverend John Todd pays tribute to the triumph of the Transcontinental as he considers its significance for the nation at large. In this collection of essays, published four months after the completion of the railway, Reverend Todd recalls how in the moments leading up to Stanford's ceremonial hammering, millions gathered in solemn anticipation. From coast to coast, "in Washington, Cincinnati, Chicago, all the western cities, in New York, even Halifax, in all the Pacific cities, people stand grouped and breathless around the telegraph offices."¹ Stunned into breathless silence, the Reverend's portrait captures the spirit of a nation united by reverential sentiment. He uses enchanted, almost fantastical language to describe the air of deference emanating from the crowds gathered at telegraph stations across the continent. "In all these places," Todd writes, millions take off their hats and listen to the celebration's inaugural prayer as it "leaps over the wires, sentence by sentence, to places four thousand miles apart."²

The apocryphal tale Todd tells shrouds telegraph and railway technology in mystery. His messages seem to travel faster than electricity, as operators clear the wires awaiting news from Promontory that would come "leaping over the wires." Listeners everywhere across the continent, segregated by distance, as thus united by a shared sense of awe as they witnessed the completion of the fabled railroad. The triumph of the Transcontinental, as Todd observes, lay not only with its power to unite the country by compressing geography, or what German cultural

¹ John Todd, *The Sunset Land; or, The Great Pacific Slope* (London: Hodder and Stoughton, 1869), 243.

² Ibid.

critic Wolfgang Schivelbusch described as the railroad's "annihilation of space and time."³

Crowded together and united affectively, the iron road also animated amongst listeners a patriotic spirit transformed into national feeling. By invoking a notion of national feeling, Todd's recollection underscores how advancements in science and technology in the United States could heal a nation in the aftermath of the American Civil War (1861-1865).

My study examines the development of railroad infrastructure as a vehicle through which the nation, and national identity, are historically configured. Because the first appearance of railroads across the globe in the 19th and 20th centuries coincided with the emergence of modern nationalism within a world system of nation-states, where the nation functions as the primary expression of political sovereignty, railroads serve as important infrastructural mechanisms that conveys how the political form of the nation, with distinct territorial boundaries, are historically produced. Although railroads allow goods, people, capital, and knowledges to circulate within national boundaries, and often serve as the material form through which disparate peoples are brought into contact under a cohesive nation, one of the goals of this study is to shed light on the ways in which national infrastructure projects are entangled with forces extraneous to the nation. By tracing the global connections that have enabled and facilitated the construction of national infrastructures, this thesis contemplates how these connections have been disavowed in national historiographies not only as a means through which the nation-state appears as a coherent subject of history, but also obfuscates their role as instruments of imperialism. In so doing, my introductory chapter provides a brief overview outlining how the Transcontinental Railroad has been studied and celebrated, outlining how railroad construction has been circumscribed by the

³ Wolfgang Schivelbusch, *The Railway Journey: The Industrialization of Space and Time in the Nineteenth Century* (Berkeley: University of California Press, 2014), 33.

parameters of national history as a means of naturalising the United States as a liberal nation-state, rather than an imperial formation.

As archived periodicals show, many contemporaneous commentators shared in Reverend Todd's view. On the frontpage of the May 10th, 1869, edition of the *Sacramento Daily Union* for example, the newspaper celebrates the occasion by elevating the Transcontinental's import in relation to the Civil War. But unlike war, "here was a triumph bloodless, deathless, but no less glorious to the nation and the state; a victory over space, the elements, and the stupendous mountain barriers separating the East from the West, and apparently defying the genius and energy of man to surmount [...]. The people felt that it was a mighty thing for the country, for California, and for San Francisco."⁴ Fastening the significance of the railroad to Civil War's aftermath, the *Sacramento Daily* presents the Transcontinental both as the literal reunion and symbolic resolution for the country wounded by the bloody division wrought by war. Similarly celebrating the railroad for its capacity for national unification, the *New York Daily Herald* lauded the occasion by writing, "the long-looked for moment has arrived. The construction of the Pacific Railroad is *un fait accompli*. The inhabitants of the Atlantic board and the dwellers of the Pacific slope are henceforth emphatically one people."⁵ Even Stanford's golden spike bore the words "May God continue the unity of our country as this Railroad unites the two great Oceans of the world" etched into its side.⁶

Reflected in these celebratory accounts is a nationalist framework celebrating the railroad as a "mighty thing for the country," by conquering the "stupendous mountain barriers separating

⁴ "The Railroad Celebration in San Francisco," *Sacramento Daily Union*, May 10, 1869, <https://cdnc.ucr.edu/?a=d&d=SDU18690510.2.5&srpos=23&e=-----186-en--20--21-byDA-txt-txIN-transcontinental+railroad----1869---1> (Accessed May 20th, 2022).

⁵ "The Pacific Railroad: The Last Rail Laid and the Last Spike Driven," *The New York Daily Herald*, May 11, 1869, <https://www.newspapers.com/clip/30024059/transcontinental-railroad-completion/> (Accessed May 19th, 2022).

⁶ James D. Drake, "A Davide to Heal the Union: The Creation of the Continental Divide." *Pacific Historical Review* 84, no. 4 (2015): 409-447.

East from the West,” and transforming the settlements on the Atlantic and Pacific coasts into “one people.” But for Reverend Todd however, it was not only the Sierra Nevada mountains that divided the nation, but the Pacific Ocean as well. As he proclaimed in his prayer inaugurating the festivities at Promontory earlier that day, Todd saw the Transcontinental as a global enterprise that would change the course of human civilization: “China is our neighbour now, the East and West embrace; nay, we hardly know which is East or which is West. This one road has turned the world round.”⁷ “East and West” take on new meaning as Todd protracts the scale and scope of the railway across the Pacific. Thus, while each sentiment finds in the railway a path to concord and confederation, they do so on differing spatial scales. Connecting the disparate “inhabitants of the Atlantic board and the dwellers of the Pacific slope” and “the two great oceans of the world” together, the *New York Daily* and the inscription carved into the golden spike employ a continental frame of reference that binds U.S. national identity to its geographic territories. Adopting a far more ambitious scale in contrast, Reverend Todd casts the railway’s sphere of influence across the Pacific Ocean, first onto China and then latches onto the amorphous “East” more broadly. But if the historical import of the railway lies in its capacity for unification, these celebratory accounts seem divided on the precise targets of this merging. Underlying these appraisals of the Transcontinental Railroad are multiple competing and overlapping spatial frameworks—regional, national, global—through which Americans responded to the ongoing transformation of space in the 19th century which I take as a central focus of this study.

The national framework has also served as an enduring point of reference in scholarship analysing the historical significance of the Transcontinental Railroad. In the American context,

⁷ Todd, *The Sunset Land; or, The Great Pacific Slope*, 261.

William F. Deverell's *Railroad Crossing* chronicles the troubling process with which Californians came to terms with the social upheavals brought by the transcontinental railways and their corporations. Writing against the grain, Deverell shows how Californians did not always delight in the purported advantages the transcontinental railroad would bring, but often opposed the technology and held railroad monopolies in contempt.⁸ William G. Thomas' *The Iron Way* studies railroad development in relation to the Civil War, explaining how the transcontinental project was from its inception, a site of colonial contestation between the Northern Union and the Southern Confederacy, with both powers competing to expand their empires into the western frontier.⁹ Thinking about the relationship between industrial development, immigrant labour, and American citizenship, in *The Filth of Progress*, Ryan Dearing examines what he considers the central paradox of U.S. 19th century industrial development and infrastructures of westward expansion by looking at the ways in which these projects were considered marvels of American engineering, industry, and ingenuity, but were in fact, made possible only by Irish, Mormon, and Chinese labourers who were considered unworthy of American citizenship. Dearing argues that during the 19th century, the building of new canals and railroads did not signify progress, but rather, were spaces of conflict and contestation who clashed over the meaning of work, progress, masculinity, and citizenship.¹⁰

While these scholars examine early U.S. railway development within the parameters of American history, more recently, a growing body of literature devoted to highlighting the transcontinental's global ties has emerged. For example, Richard White's *Railroaded* extends the

⁸ William F. Deverell, *Railroad Crossing: Californians and the Railroad, 1850-1910* (Berkeley: University of California Press, 1994).

⁹ William G. Thomas, *The Iron Way: Railroads, the Civil War, and the Making of Modern America* (New Haven: Yale University Press, 2011).

¹⁰ Ryan Dearing, *The Filth of Progress: Immigrants, Americans, and the Building of Canals and Railroads in the West* (Berkeley: University of California Press, 2015).

scope of his analysis across the Americas, including railway lines in western Canada and northern Mexico in his consideration of the transcontinental railways, showing how the transcontinentals functioned as an international network. Thinking beyond the physical geographies onto which the transcontinental railroads were built, Gordon H. Chang's essay in *The Chinese and the Iron Road*, examines what he describes as the "railroad's indelible and fundamental link with China," focusing on the figure of China in animating the very idea of a transcontinental highway across America, as well as the Chinese migrant labourers who toiled for its completion.¹¹ Chang places global history in dialogue with U.S. national history to argue that America's commercial aspirations with China played a critical role in animating the very idea of a transcontinental highway. In a similar vein, Kevin Waite's *West of Slavery* offers an analysis of how Southern slaveholders framed the transcontinental railroad as an opportunity to stabilise and further America's cotton industry by securing an overseas Chinese market to alleviate the problem of surplus production domestically.¹² In presenting the transcontinental as a gateway to China and a vital lifeline for the Southern cotton industry, Waite shows how the struggle over slavery's future unfolded on the transcontinental railroad as well.

Although this literature provides a compelling account of the limits of the national framework by uncovering the global forces undergirding the Transcontinental's construction and offers an important reminder of the ways in which the nation-state is articulated and developed within a global system, they do not challenge the very concept of the nation as a coherent unit of analysis. In light of this lacuna, Manu Karuka's *Empire's Tracks*, examines key moments in the

¹¹ Gordon H. Chang, "Chinese Railroad Workers and the US Transcontinental Railroad in Global Perspective," in *The Chinese and the Iron Road*, ed. Gordon H. Chang and Shelley Fisher Fishkin (Stanford: Stanford University Press, 2019), 29.

¹² Kevin Waite, *West of Slavery: The Southern Dream of a Transcontinental Empire* (Chapel Hill: The University of North Carolina Press, 2021), 11-88.

making of the nationalist mythology of the United States: the completion of the transcontinental railways; the Golden Spike ceremony; the “benighted” Indigenous communities dispossessed of their lands and waterways by the railways; exploited Chinese migrant labourers, who, by virtue of their suffering, became eligible for American citizenship and national belonging. By disrupting these nationalist narratives, Karuka not only clarifies their contradictions, but also reveals the continuities between processes of infrastructure development, Indigenous dispossession, and labour migration with the global histories of imperialism and anti-colonial struggle. Karuka’s insistence that the history of the transcontinental railways, like the history of the United States and settler-colonial societies in North America more broadly, are imperial formations, rather than liberal national formations, is an approach that is at the core of my examination.

My study of infrastructures as a means of revealing the process by which the nation-state and national identity are historically configured draws on studies of science and technology to highlight the material function of these infrastructures and the ways in which this materiality informs political processes. At the same time, my study is also guided by the notion that infrastructures do not exist purely within their technological functions. Rather, as Bran Larkin has observed, I conceive of infrastructures as that which is inscribed with political symbolisms which need to be analysed as semiotic and aesthetic vehicles as well, for “they emerge out of and store within them forms of desire and fantasy and can take on fetish-like aspects that sometimes can be wholly autonomous from their technological function.”¹³ As such, my analysis of infrastructures also explores how railroads are imbued with imperial expansionist fantasies despite giving material form to the nation-state. In James A. Ward’s study of 19th century

¹³ Brian Larkin, The Politics and Poetics of Infrastructure,” *Annual Review of Anthropology* 42 (2013): 329.

American railroads, Ward demonstrates how railway barons found in the language of imperialism an advantageous rhetoric to conceive of their lines: Railway officials referred to executives as “rulers,” their institutional agendas as “statecraft,” competition as “warfare,” and the protection of their own business interests as “territoriality.”¹⁴ Here, in addition to its material function, Ward’s study explains how railroad infrastructures also serve as semiotic vehicles that betray railway’s imperial functions. In Fredrik Meiton’s work examining the relationship between infrastructural development and settler-colonialism in Mandate Palestine, infrastructure takes the form of electrical cables. Examining the implementation of Mandate Palestine’s first electrical distribution system in the 1920s, Meiton shows how the cables were imbued with political symbolism by signalling the encroachment of Jewish nationalism on Arab Palestine.¹⁵ Turning to electricity supply in the Russian context, Stephen Collier organises his analysis of infrastructures around questions practices of government, and how electrical systems can teach us about the post-Soviet transition.¹⁶ It is likewise this intersection between infrastructures and forms of governmentality that drives Foucault’s contention that infrastructures are necessary for the development of liberalism by facilitating the organisation of a market economy.¹⁷ Infrastructures in this sense is both a material object as well as a means of organising everyday life – a way of living and moving through the world.

More than manmade railways, electricity cables, and communication networks, infrastructures can also take the form of natural resources, or more specifically, control over

¹⁴ James A. Ward, *Railroads and the Character of America 1820-1887* (Knoxville: The University of Tennessee Press, 1986).

¹⁵ Fredrik Meiton, “Boundary-Work and the Origins of the Arab-Israeli Conflict,” *Past & Present* 231, no. 1 (2016): 201-236.

¹⁶ Stephen J. Collier, *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics* (Princeton: Princeton University Press, 2011).

¹⁷ Michel Foucault, *The Birth of Biopolitics: Lectures at the College de France, 1978-1979*, edited by Michel Senellart and translated by Graham Burchell (New York: Palgrave MacMillan, 2008).

one's right to access natural resources. As Anita von Schnitzler's work on the on the water-meter in South Africa evinces, the introduction of an urban water prepayment scheme was not only intended to manage water usage, but also functioned as a technology of neoliberal citizenship in the post-apartheid state.¹⁸ For von Schnitzler, infrastructures include technologies of water provision (pumps, pipes, engineers), as well as financial institutions that made prepayment a ubiquitous practice in South Africa. These forms of privatisation represented to those opposing the water-meter the impoverishment and dissolution of social democratic conceptions and practices of citizenship. Infrastructures as von Schnitzler theorises it expressed "the sense of the increasing enclosure of basic necessities," and indicated "how the ubiquity of prepayment technology" and other forms of privatisation represented the impoverishment of social democratic conceptions and practices of citizenship. The water-meter, a seemingly innocuous and neutral practices is in this way the grounds onto which moral behaviour, forms of citizenship, and modes of belonging are contested.

By studying infrastructures' material as well as symbolic function, I analyse railroad infrastructures as an amalgam of technical, financial, political, and social systems through which these material and symbolic operations come to light. In this way, I study the railroad through a systems analysis which Larkins describes as that which "demands an ethnographic retooling, one in which ethnography might need to be conducted in government centers far from where the actual roads are constructed and might take into account politicians, technocrats, economists, engineers, and road builders, as well as road users themselves."¹⁹ A systems analysis of railroad infrastructure not only helps us broaden our understanding of infrastructures and their functions

¹⁸ Anita von Schnitzler, "Water, Calculability, and Techno-Politics in South Africa," *Journal of Southern African Studies* 34, no. 4 (2008): 899-917.

¹⁹ *Ibid.*, 328.

beyond national boundaries, but uncovers the process with which the nation-state is materially and symbolically constituted. As I argue throughout this paper, the Transcontinental Railroad's influence transcends national boundaries, not only transforming America, but China as well.

To explore the ways in which railroad infrastructure serve as a vehicle through which the nation, and national identity, are historically configured, my first chapter analyses how railroad development shaped the formation of modern nation-states by providing a historical overview of railroad development in a global context. Although railroads were invented in England, I begin by charting the development of a U.S. national railway system in the 19th century, which, due to its geographical expanse, far outreached the lengths of Great Britain's tracks. By chronicling attempts to implement railway standardisation measures, I show how despite efforts to integrate disparate communities into a unified national body through the standardisation of railway gauges and the implementation of standard time, railways in fact exacerbated the structural incoherence of the U.S. nation. Next, I situate these attempts to standardise space and time in conversation with the development of national railway systems globally, spotlighting the ways in which international geopolitics influenced the development of national infrastructure systems. In so doing, I show how the nation-state, and its infrastructures, did not emerge within a closed system, but rather, developed through and in relation to a world that lies beyond national borders.

Chapter two explores these global connections by analysing the Transcontinental Railroad's ties to China. While Gordon Chang suggests that the "railroad was the realization of a long standing vision that appeared in 1840s America, I contend that Transcontinental's construction was also informed by the late 18th century context.²⁰ Through my survey of early national biographies featuring American merchants launching the Old China trade, I illustrate

²⁰ Chang, "Chinese Railroad Workers and the US Transcontinental Railroad in Global Perspective," 29.

how China served as a critical setting for the development of American national character. I argue that these early literary texts figured commerce with China as a means of realising American national character, which then informed the envisioning and the construction of the transcontinental railway. In so doing, I study the life of Asa Whitney (1797-1872), whose brief trip to China during the First Opium War (1839-1842), impressed upon him the need for a highway connecting the Atlantic and Pacific coasts. On his way home from China, Whitney began to draft an idea that would later become the Transcontinental Railroad, or what he called at the time, a “highway to the Pacific.” A pioneering proponent of the Transcontinental Railway, Whitney used the fortunes he amassed during his stint in China to campaign and conduct land surveys mapping possible railroad routes. Strengthening commerce with China and facilitating western settlement were the twin principles guiding his railway project. Whitney’s relationship to China illustrates the global connections that facilitated America’s westward expansion, the drawing of its national boundaries, and the construction of national character. As I argue, the figure of China as a setting for articulating American character in early national biographies crucially informed Whitney’s framing of the transcontinental highway as a gateway to China as a means of transcending political difference and realising a cohesive national identity.

Chapter three elaborates upon the transcontinental’s ties to China through an exploration of railroad construction projects in China during the late Qing and early Republican periods, focusing specifically on the Xinning Railway. Designed by Chen Yixi (1844-1929), a Chinese migrant who had worked on the first Transcontinental Railroad, the Xinning Railway was one of the first railways built in southern China funded solely by private Chinese capital in the early 20th century. Prior to 1911, most railways in China were either constructed by foreign powers or with foreign capital. In this context, that the Xinning Railway operated entirely under Chinese

management and capital symbolises a critical turning point in the development of a national railway system. While studies of railroad development in the late Qing and early Republican periods tend to focus on the semicolonial context under which railways served as “the most visible manifestation of the imperialist presence in the Middle Kingdom,” and thus a site of anti-imperial struggle through which a modern Chinese nation-state emerged, I propose a more capacious approach that not only accounts for how the semicolonial context in Qing China shaped railway development, but how Chinese people, and Chinese overseas migrants who laboured on the transcontinental railways specifically, were also agents in the railway and nation building process.²¹

By canvassing an array of proposals seeking funding for the railway, I show how Chen galvanised support for his project by framing it as a national enterprise that made financial contributions to infrastructural modernisation a civic duty. But for a project so explicitly anti-foreign, curiously, it was overseas Chinese migrants—particularly those living the United States—who proved to be the most ardent supporters. Thus, despite his best efforts to present his enterprise as one free from foreign interference, I argue that Chen’s railway was in fact the product of global flows of capital, labour, and infrastructures. By mapping the connections between overseas Chinese migrants and Chinese railways, this study offers the Xinning Railway as an infrastructural medium to explore the development of a national transportation system beyond the confines of national borders. Rather than adopting a comparative approach that juxtaposes China’s railways with other national railways, my examination of the Xinning Railway develops a relational approach that situates China’s national infrastructure development within a global system. Through a close-reading of letters, diaries, and journals written by

²¹ Ralph William Huenemann, *The Dragon and the Iron Horse: The Economics of Railroads in China 1876-1937* (Cambridge: Harvard University Press, 1984), 2.

American and Chinese railroad visionaries, my analysis traces recurring tropes and metaphors to consider the ways in which infrastructures are not only informed by politics, but productive of political subjectivities. In this context, I maintain that a close reading of how political histories and relationships can be inscribed within railroad technologies provides us with a fruitful starting point to study the ways in which conceptions and practices of national identity are materially and symbolically configured.

CHAPTER ONE – RAILROAD DEVELOPMENT IN A GLOBAL CONTEXT

In an era characterised by rapid continental expansion through the violent expropriation of Indigenous lands and waterways, in the 19th century, U.S. national boundaries were not static but continually drawn and redrawn through treaty, purchase, acquisition, and war.²² With events such as the Louisiana Purchase (1803), resulting in the acquisition of Louisiana from France thus effectively expanding the scale of American national territories by twofold, and the Mexican-American War (1846-48), leading to the acquisition of Texas and California, Hsuan Hsu writes that during this period, “Americans felt that they were witnessing the emergence of new spaces, the gradual manifestation of their nation’s geographical destiny.”²³ Their sense of “geographic destiny,” or Manifest Destiny, extended beyond the places geographically contiguous to the continent.²⁴ As events such as the Alaska Purchase (1876), the Spanish-American War (1898), and the annexation of Hawai’i territories (1900) make known, geographical distance did not necessarily serve as an impediment to U.S. territorial expansion. Thus, witnessing the emergence of new spaces not only entailed the expropriation, conquest, and settlement of spaces on or across the continent, but also in places separated by large expanses of water. Advancements in both rail and steamship technologies enabled and mediated these processes.

In addition to the acquisition and the “opening” up of new territories, 19th century America also observed the rapid growth of its urban cities stimulated by the great wave of

²² Mark Rifkin, *Manifesting America: The Imperial Construction of U.S. National Space* (Oxford: Oxford University Press, 2010), 5.

²³ Hsuan Hsu, *Geography and the Production of Space in Nineteenth-Century American Literature* (Cambridge: Cambridge University Press, 2010), 4.

²⁴ For a discussion of Manifest Destiny, see: Kris Fresonke, *West of Emerson: The Design on Manifest Destiny* (Berkeley: University of California Press, 2003); Reginald Horsman, *Race and Manifest Destiny: The Origins of American Racial Anglo-Saxonism* (Cambridge: Harvard University Press, 1981); Mark Rifkin, *Manifesting America: The Imperial Construction of U.S. National Space* (Oxford: Oxford University Press, 2010); Henry Nash Smith, *Virgin Land: The American West as Symbol and Myth* (Cambridge: Harvard University Press, 1970).

migration, the intensification of its raw material export industries, and an increase in global commodities arriving through U.S. commercial ports. Because these changes depended largely on advancements in railway and maritime technologies, transportation infrastructures functioned as means through which conceptions of space expanded and relationships to difference places and people transformed. Beginning with the construction of the Baltimore & Ohio Railway in 1827 and up until the turn of the century, Americans witnessed both the appearance of the nation's first common-carrier railroad and the exponential growth of railway lines. The completion of transcontinental railways in the 1870s sparked a boom in railway construction across the Americas, and on top of the 45,000 miles of iron tracks laid by 1871, more than 170,000 miles were added to this labyrinthine network by 1900. Within the span of a century, what had begun as a belated technological development far outreached the lengths of Great Britain's tracks.

Although the rapidity with which American railroad lines grew were impressive in aggregate, the lack of an established standard gauge for railway tracks belies the structural coherence of a national transportation system. Even as most eastern railways adopted the British standard of 4 feet and 8½ inches, in the 1860s, there were at least twenty-three distinct gauges in operation across North America, and the British standard only accounted for approximately half of total railroad mileage. In the Southern states, railways supporting the cotton and tobacco industries employed 5 feet and 6 inch gauges, disclosing the discord between the Union and the Confederacy later amplified in the Civil War. Kincaid Herr describes these differences between northern and southern gauges as a “frontier,” dividing two “foreign countries.”²⁵ Richard White explains that “different gauges were akin to dams in the thin streams of iron flowing through the

²⁵ Kincaid A. Herr, *The Louisville and Nashville Railroad, 1850-1962* (Lexington: University of Kentucky Press, 2019), 78.

continent. When gauges changed, traffic stopped. Passengers had to walk to a new train; freight had to be off-loaded at considerable expense or cars had to be jacked up and their wheels adjusted before the train could continue transit.”²⁶ These interruptions were not only expensive for railway companies, but also placed a cap on potential profits by restricting freights from moving beyond certain boundaries.

Mirroring the instability of the early republic’s national boundaries, American railroads prior to the transcontinental lacked organisation – the lines that seem to flow seamlessly into one another on a map ruptured in reality because of a small difference in space between the rails.²⁷ Prior to the standardisation of railway gauges, incompatible gauges produced divisions within the nation while also reflecting the structural incoherence of the early American republic. In this context, infrastructures both materialise and symbolise sectional divides. White argues that these disarticulated lines failed to constitute a cohesive system: “A railroad system was ‘articulated,’ the way the bones of a skeleton might connect, but the muscles and tendons were wagons, ferries, and human bodies. Take them away, and the railroad skeleton fell into unconnected pieces.”²⁸ Drawing an analogy between the disjointed transportation system and a skeletal body, White, much like the *New York Daily* who contended that the transcontinental would transform the eastern and western settlements into “one people,” figures railroads as an infrastructural manifestation of the U.S. body politic. The railway as a metaphor for the body politic functions by grounding geographic territories as the material basis through which a unified national subject emerges. Indeed, as Julia H. Lee has remarked, “the impulse to imagine the train as a part of the anatomy of the nation’s body, as intrinsic and fundamental to the functioning of its economy,

²⁶ White, *Railroaded*, 32.

²⁷ Ibid.

²⁸ Ibid.

culture, and social life, is one in which many artists, politicians, and other public figures have engaged.”²⁹ If the nation’s railways overcame these infrastructural incongruities, the disparate communities scattered across its ever expanding territories could unite in one body. Although a costly and labour-intensive process, by the end of the 19th century, railroads across the U.S., Canada, and Mexico had adhered to the new standard facilitating the expansion of markets and settlements enabled by railway construction.³⁰

In addition to the standardisation of gauges, the systemisation of U.S. railways also demanded that railway magnates attend to the problem of time. Prior to the adoption of Standard Time in 1883, railways operated in accordance with the time kept in locales from where lines began. Due to a lack of set conventions for measuring time, the problem of keeping and managing hundreds of local times became a persistent problem endemic to railroad transportation. As railway tracks grew longer and more intricate over the 19th century, the number of railroad times proliferated so enormously that on the eve before the adoption of Standard Time, there were over 249 times in operation across the country’s 316 railroads. The Union Pacific Railroad line, which constituted more than half the length of the first Transcontinental Railroad, operated on six different times alone. Rather than a cohesive system, it was a loose collection of unrelated times that overlapped at 300 points all over the country.³¹

Months after the completion of the Transcontinental in 1869, Charles F. Down submitted the first proposition seeking to implement standardised time zones for American railways to a

²⁹ Julia H. Lee, *The Racial Railroad* (New York: New York University Press, 2022), 17.

³⁰ For a discussion of the history of railway gauge standardisation, see: Frank Dobbin, *Forging Industrial Policy: The United States, Britain, and France in the Railway Age* (Cambridge: Cambridge University Press, 1994); Daniel P. Gross, “Collusive Investments in Technological Compatibility: Lessons from U.S. Railroads in the Late 19th Century,” *Management Science* 66, no. 12 (2020): 5683-5700; Douglas J. Puffert, *Tracks Across Continents, Paths Through History: The Economic Dynamics of Standardization in Railway Gauge* (Chicago: University of Chicago Press, 2009).

³¹ Ian R. Bartky “The Adoption of Standard Time,” *Technology and Culture* 30, no. 1 (1989): 25-56.

committee of railway executives in New York, out of concern for the disorienting effects journeying through multiple temporalities would have upon travelers. Dowd complained that the railway times adopted by certain lines and companies were discordant and unsystematic, “governed by no general principle which would enable a person familiar with them in one locality, to judge of them in another.”³² Therefore, any traveler “upon leaving home, loses all confidence in his watch, and is, in fact, without any reliable time.”³³ To his chagrin, Dowd faced strong opposition, with many citing difficulty of implementing a new national time standard. As one prominent railroad superintendent asserted, the centuries-old local time system “and the hold it has upon the literature, manners, and customs of the people is clearly beyond the power of the greatest power in the land to alter.”³⁴ Echoing this, the U.S. Senate stated in a 1882 report that the difficulty of abolishing local time “would appear to be as difficult to alter by edict the ideas and habits of the people in regard to local time as it would be to introduce among them a novel system of weights, measures, volumes and money.”³⁵ Like other units of measure, conceptions of time defined the ideas and habits of local communities – adopting a national standard would destabilise social structures. Standardising railway time into an organised national system was in this way articulated not only as a pragmatic issue, but a metaphysical one as well.

The standard time debates described above were not exclusive to America as similar debates were occurring internationally, compounded by the influx of railway project developing across the world. In 1884, U.S. President Arthur requested that Cleveland Abbe, the director of the U.S. Signal Service Bureau, call upon the international scientific community “to fix on and

³² Charles F. Dowd, *System of National Time and Its Applications, by Means of Hour and Minute Indexes, to the National Railway Time-Table* (New York: Weed, Parsons, & Co., Printers), 107.

³³ Ibid.

³⁴ Frederick T. Newberry to *Travelers Officials Guide*, April 1882, reprinted in in *Proceedings of the American Railway Association Vol. 1* (1893), 684-685.

³⁵ U.S. Congress, Senate, Committee on Foreign Relations, *Common Prime Meridian: Senate Report*. 47th Congress, 1st Session, 1882, 135.

recommend for universal adoption a common prime meridian, to be used in the reckoning of longitude and the regulation of time throughout the world,” which resulted in the International Meridian Conference held in Washington that year.³⁶ At the conference, U.S. Admiral William Rodgers implored representatives of the twenty-five countries in attendance to decide on a meridian for the “common good of mankind, and gain for science and for commerce a prime meridian acceptable to all countries, and secured with the least possible inconvenience.”³⁷ For the American delegates at the conference, the most obvious and suitable standard was the British Greenwich Meridian. Referring to the Greenwich Meridian as most conducive for science, commerce, and mankind, the resolutions expose Britain’s dominance over the international scientific community by eliding “science” with a British imperial measure of time.

As the future of international communications and commerce was dependent on the meridian adopted at the conference, some saw the Greenwich as an extension of British imperialism. Frustrated by Great Britain’s influence over this decision, French delegates tackled the blatant Anglocentrism undergirding the resolution, admonishing the Greenwich Meridian as “entirely devoid of any claim on the impartial solicitude of science,” governed only by “material superiorities” and “commercial preponderances.”³⁸ Instead, the French proposed that the meridian should “have a character of absolute neutrality. It should be chosen exclusively so as to secure to science and to international commerce all possible advantages, and especially should cut no great continent—neither Europe nor America.”³⁹ Of the twenty-five countries participating, only Brazil and the Dominican Republic supported France in their call for

³⁶ Bartky, “The Adoption of Standard Time,” 41.

³⁷ *International Conference Held at Washington for the Purpose of Fixing a Prime Meridian and a Universal Day. October 1884. Protocols of the Proceedings* (Washington: Gibson Bros., Printers and Bookbinders, 1884), 6.

³⁸ *Ibid.*, 92.

³⁹ U.S. Congress, International Conference, “International Conference Held at Washington for the Purpose of Fixing a Prime Meridian and a Universal Day: Protocols of the Proceedings, October 1, 1884,” in *United States Congressional Serial Set, Vol. 2296*, 22.

neutrality, so the resolution did not pass. Having reached a consensus, U.S. delegate William F. Allen congratulated the committee claiming that “the system adopted by you now governs the daily and hourly actions of at least fifty million people.”⁴⁰ Although, even as European powers later built railroads in their colonies in the following decades, the tyranny of the Greenwich Meridian did not quite reign over the daily and hourly actions of their colonial subjects as Allen had so jubilantly hypothesised. Indeed, as On Barak’s study of how spatial and temporal commensurability functions across a colonial divide demonstrates, these standardisation measures did not singularly supersede indigenous conceptions of time and space, but rather, coexisted, transformed, and contested them. By exploring how the introduction of modern transportation and communication infrastructures—and its attendant standardised timekeeping measures—shaped conceptions of time in colonial Egypt, Barak theorises what he calls “countertempos,” built on the “discomfort with the time of the clock and a disdain for dehumanizing European standards of efficiency, linearity, and punctuality.”⁴¹

Abolishing local time and changing spaces between gauges to better integrate U.S. railways into a cohesive nationalised system redrew spatial and temporal boundaries within the American borders. At the same time, the implementation of a global standard for time restructured and established new standards of alliance internationally.⁴² National security and economic prosperity were hopes that guided the delegates’ decisions for it not only that the British standard was the most ubiquitous and “offers the most chances of being generally accepted.” More importantly, a vote in support for the Greenwich Meridian was a recognition of

⁴⁰ *Proceedings of the American Railway Association Vol. 1 (1893)*, 703.

⁴¹ On Barak, *On Time: Technology and Temporality in Modern Egypt* (Berkeley: University of California Press, 2013), 5.

⁴² These international standards set by the British also served as an important military tactic later during World War I. For a discussion of this, see: Jonathan E. Hillman, *The Emperor’s New Road: China and the Project of the Century* (New Haven, Yale University Press, 2020), 31-32.

British dominance over 19th century global trade and a means of accessing markets under the empire's control. By reminding delegates that their vote should be devised for the gains of commerce, the American delegates gave voice to the economic stakes undergirding their votes. That American delegates voted unanimously in favour of the British is unsurprising given that they were each other's primary markets. The Revolutionary War bought the United States political, rather than economic independence and trade statistics show how the central features of the trans-Atlantic trade in the colonial period endured into the post-Revolutionary period. Even as American colonists increasingly came to think of themselves as free from British dominion, they still imported most of its manufactured goods from the metropole. And despite publicly admonishing the institution of slavery, the British nevertheless profited greatly from the U.S. cotton and tobacco industries that depended upon Black enslavement and the conquest of Indigenous peoples and lands.

These technological standards set by "imperial railroads often constructed people and goods within a specific imperial network," producing what Manu Karuka calls "economies of isolation."⁴³ Karuka explains that due to British investment in foreign infrastructure development, railroads around the world were built according to the standards set by the British empire which facilitated their monopoly over global trade networks. Imperial railways are thus both manifestations and vehicles through which global relations of uneven interdependence are maintained and produced anew. In North America, U.S. railroad companies built a continental imperial network by laying tracks across its borders according to its industry standard, holding Canada and Mexico captive as markets for U.S. agricultural and manufactured goods. British corporate control over Brazilian railway development made it so that commerce with Europe and

⁴³ Karuka, *Empire's Tracks*, 41.

North America was more profitable than regional trade, delineating another economy of isolation that severed Brazil from its Latin American neighbours.⁴⁴ In Australia, railroads were constructed by the settler-colonial state largely in response to a dwindling settler population due to high rates of emigration driven by tales of California's fabled gold mines. Australian railway corporations argued that their railways would bring economic development and forestall emigration. Containing the threat of Aboriginal insurrection, railroads were promoted as a settler colonial infrastructural network establishing white territoriality.⁴⁵

In South Asia, railroads similarly transformed India into a market for British capital. "Designed exclusively to meet the needs of colonial powers," Armand Mattelart argues that the building of railways in the colonies "was based on the penetration model, to serve the demands of trade and the exploitation of natural resources."⁴⁶ To compete with U.S. cotton prices, British textile manufacturers lobbied for state support of Indian infrastructure development to facilitate the shipment of their products into the interior, simultaneously destroying indigenous artisanal industries in favour of cotton cultivation and detaining the emergence of industrial industries.⁴⁷ British colonial railroad policy in India also "stipulated the purchase of rails, locomotives, and nonspecialized track fittings from British manufacturers, providing a sphere for the circulation of idle British capital."⁴⁸ Infrastructure projects in the colonies offered a solution to crises of capital overaccumulation by opening up new territories for investment. Rosa Luxemburg explains that there inevitably comes a point in the development of capital whereby the home market is no longer sufficient for capital accumulation. The solution to this problem is the predation of non-

⁴⁴ Ibid.

⁴⁵ Ibid., 44.

⁴⁶ Armand Mattelart, *Networking the World: 1794-2000* (Minneapolis: University of Minnesota Press, 2000), 9.

⁴⁷ Karuka, *Empire's Tracks*, 43.

⁴⁸ Ibid.

capitalist economies. Whether by policy, conquest, acquisition, or theft, capital accumulation “is possible only if new districts with a non-capitalist civilization, extending over large areas, appear on the scene and augment the number of consumers.”⁴⁹ The moment capitalism invades, cheap manufactured products displace indigenous modes of production and small-scale enterprise thereby securing a market for the ever-increasing outputs from industries in the old centers of capitalism without having to raise consumer’s standards of living.⁵⁰

Seeking relief to the crisis of overaccumulation in the 19th century, British capital used a combination of these coercive tactics in China to augment the number of consumers through infrastructural investment. In a letter to Russian economist Nikolai Danielson in 1892, Friedrich Engels summarised the situation in China like this: idle, unproductive capital “can find some means of relief in this seemingly hopeless situation by heroic measures of commercial policy, that is to say by forcibly opening up new markets. China is the most recent market to be opened up for English commerce, and it proved adequate for a temporary revival of prosperity. That is why English capital is so insistent on railroad building in China.”⁵¹ These “heroic” commercial policies in China came in the wake of the Qing dynasty’s military defeat in the two Opium Wars (1839-1842; 1856-1860), in the form of a series of unequal treaties forcing China to cede land, pay reparations, open treaty ports, and grant extraterritorial privileges to foreigners. Writing in the mode of classical Marxist historiography, Engels continues his letter by outlining a teleological narrative of China’s transformation into a market for British capital,

Yet railways in China mean the destruction of the entire foundation of China’s small rural enterprises and her domestic industry. In this case, there is not even a native big industry developed to compensate for this evil to some extent, and hundreds of millions will consequently find it impossible to make a living at all. The result will be mass

⁴⁹ Rosa Luxemburg, *The Accumulation of Capital* (London: Routledge Press, 2003), 409.

⁵⁰ *Ibid.*, xxxv.

⁵¹ Friedrich Engels to Nikolai Danielson, September 22, 1892. Quoted in *The Accumulation of Capital* (London: Routledge Press, 2003), 267-269.

emigration, such as the world has never yet seen, and America, Asia, and Europe will be flooded with the detested Chinese. This new competitor on the labour market will compete with American, Australian and European labor at the level of what the Chinese consider a satisfactory standard of living, which is well known to be the lowest in the whole world. Well then, if the whole system of production in Europe has not been revolutionized by then, that will be the time to start this revolution.⁵²

According to this account, the unequal treaties the Qing was forced to sign following their defeat in the Opium Wars liberated British capital from its state of inertia. These treaties plundered primitive modes of production for capitalist ones. Without robust industries to absorb the expropriated into wage labourers, Chinese people, like the Europeans before them, would emigrate to the New World. Their mass migration would drive down the price of labour and decimate standards of living. Organised collaboration between the proletarian class would usher insurgence and rebellion. British investment in railway construction in China, by Engels' explanation, was a crucial, if devastating, event that would bring the proletarian revolution forth.

Yet the historical emergence of railroad infrastructures in late 19th century China did not follow such a neat path to revolution. China's loss in the Opium Wars granted foreign powers, such as Belgium, France, Germany, Great Britain, Japan, Russia, and the United States protected presence in treaty ports. Under this semicolonial context, Chinese railway investment offered foreign companies the chance to expand its trade activities through the development of modern transportation infrastructures. The English trading firm Jardine Matheson & Co., paved the way in 1876, building the Shanghai-Wusong Railway, China's first railroad in commercial operation. By 1885, along with investment partner Hongkong and Shanghai Bank, the two British firms had invested a total of £26 million in railway development in China.⁵³ More than transportation technologies, railways also functioned as an amalgam of business institutions and administrative

⁵² Ibid.

⁵³ Carol Matheson Connell, "Jardine Matheson & Company: The Role of External Organization in a Nineteenth Century Trading Firm," *Enterprise & Society* 4, no. 1. (2003): 129.

units “under the financial control of foreign syndicates that evaluated the business performance of these Sino-foreign railroad ventures from the perspective of foreign bondholders and investors.”⁵⁴ A study of early railway development in China charts the global connections shaping modern political, economic, and infrastructural development in China not as discrete technologies or industries, but as a cohesive system connected by railway networks.

When we take a closer look at these railways however, we find that they were not only the products of foreign interference and manifestations of imperialist presence. As Jürgen Osterhammel and others have argued, to navigate the semicolonial context in which the interests of colonial treaty port powers were enveloped with Chinese industrialisation strategies, a complex web of relationships between Chinese and foreign powers formed, including collaborative and client-patron relations.⁵⁵ Elisabeth Köll’s study on the Jin-Pu Railway Line maps these relationships showing how local Chinese people were neither reluctant nor passive recipients of these colonial infrastructures but profited from their construction as brokers.⁵⁶ While some facilitated early railroad construction in China by profiting from the imperial technologies, others fought against it, although, often with their own imperial agendas in mind. Having built China’s first railway without the Qing’s approval, the Shanghai-Wusong line ran for less than a year before it was promptly purchased and dismantled by Qing viceroy Shen Baozhen (沈葆楨), a key figure in the Self-Strengthening Movement (1861-1895) in protest to foreign encroachment.⁵⁷ After the tracks had been dismantled, Shen ordered that its remnants be

⁵⁴ Elisabeth Köll, *Railroads and the Transformation of China* (Cambridge: Harvard University Press, 2019), 6.

⁵⁵ Jürgen Osterhammel, “Semi-Colonialism and Informal Empire in Twentieth Century China: Towards a Framework of Analysis,” in *Imperialism and After: Continuities and Discontinuities*, ed. Wolfgang J. Mommsen & Jürgen Osterhammel (London: Allen & Unwin, 1986), 290-314.

⁵⁶ Köll, *Railroads and the Transformation of China*, 53-87.

⁵⁷ For literature on the construction and dismantling of the Shanghai-Wusong Railway line, see: Bruce Elleman, Elisabeth Köll, and Y. Tak Matsusaka. *Manchurian Railways and the Opening of China: An International History* (New Jersey: Taylor and Francis, 2015); James A. Flath, “The Chinese Railroad View: Transportation Themes in

taken to Taiwan, where he had previously led a colonial campaign against the aboriginal peoples in a quest to militarise the island against Japanese and European invasion. In Taiwan, Shen's military strategy was at the same time an industrial modernisation strategy, where he advocated for the opening of mining industries, building communication infrastructures, and railway development.⁵⁸ By following the movement of infrastructures across borders, the dismantling of the Shanghai-Wusong line cannot solely be attributed to technophobic stereotypes or anti-colonial rebellion, but also reflects how the Qing used railways to further their own imperial agendas.

It is all too easy to plot the history of railway advancements in China as a linear history that begins as a site of foreign encroachment, then as a site of anti-imperial struggle through which Chinese people overcame dynastic rule, and finally emerged as a modern nation. Or in the case of the transcontinental railways in the United States, as a vehicle that transformed a group of disparate colonists into a cohesive national body. Presenjit Duara critiques the teleological underpinnings of these linear narratives for myopically attributing historical movement to a series of antecedent causes rather than a complex and bifurcated interplay between past and present. His central argument is that a linear model of history is a nationalist tool that produces the appearance of a coherent national subject evolving through time: "Within this schema, the nation appears as the newly realized, sovereign subject of History embodying a moral and political force that has overcome dynasties, aristocracies, and ruling priests and mandarins, who

Popular Print, 1873-1915," *Cultural Critique* 58 (2004): 168-190; Hsien-chun Wang, "Merchants, Mandarins, and the Railway: Institutional Failure and the Wusong Railway 1874-1877," *International Journal of Asian Studies* 12, no. 1 (2015): 31-53; Shirley Ye, "Corrupted Infrastructure: Imperialism and Environmental Sovereignty in Shanghai, 1873-1911," *Frontiers of History in China* 10, no. 3 (2015): 428-456.

⁵⁸ Niki Alsford, *Transitions to Modernity in Taiwan: The Spirit of 1895 and the Cession of Formosa to Japan* (New York: Routledge, 2018), 49-50.

are merely themselves historically.”⁵⁹ Lydia Liu similarly locates a teleological tendency in Marxist historiography which focuses on modes of production to explain historical change. This model frames “China’s traumatic entrance into the modern international community,” as the transition from feudalism or the Asiatic mode of production to the capitalist mode of production.⁶⁰ According to Liu, this teleological model of history not only fails to call into question modes of colonial historiography, but also does not attend to the ways in which the linear model works to universalise events in world history.⁶¹

As an alternative to this Enlightenment model, Duara offers a “bifurcated” conception of history that is constituted by multiple, often conflicting narratives that are simultaneously produced at the local, national, and transnational scales. As I have detailed throughout this chapter, this bifurcated model of history is reflected in the global history of railroad development. When the number of railway lines rapidly expanded throughout 19th century America, railways exacerbated the structural incongruities within the early republic. These partitions and incongruities manifested themselves through disjointed railway gauges and the lack of a standardised measure of time. Despite the earnest efforts to systematise gauges and time into a national system however, these measures could not eschew the global imperial histories that determined what size of railway gauges were chosen as industry standards, where railways were implemented, and whose measure of time was esteemed as befitting the good of mankind, science, and commerce. By highlighting these global forces shaping the development of America’s national railway system, I have shown how the roots of the modern nation-state are

⁵⁹ Presenjit Duara, *Rescuing History from the Nation: Questioning Narratives of Modern China* (Chicago: University of Chicago Press, 1995), 4.

⁶⁰ Lydia Liu, *The Clash of Empires: The Invention of China in Modern World Making* (Cambridge: Harvard University Press, 2004), 111.

⁶¹ *Ibid.*, 111-112.

entangled with imperial and capitalist processes. Furthermore, as my overview of early railroad construction in China has illustrated, railway development did not only serve as a site of anti-colonial struggle, but also as an instrument of imperial rule as well. If the nation is a construction that is continuously produced and contested, I contend that a study of railroad infrastructures is a vehicle uncovers this nation-building process and to unsettle the nation-state as a natural unit of analysis by drawing out the historical continuities between imperialism, nationalism, and capitalism.

CHAPTER TWO – MAPPING THE TRANSCONTINENTAL RAILROAD ACROSS THE PACIFIC

Start now on that farthest western way, which does not pause at the Mississippi or the Pacific, nor conduct toward a worn-out China or Japan, but leads on direct a tangent to this sphere, summer and winter, day and night, sun down, moon down, and at last earth down too.

— Henry David Thoreau, *Walden* (1854)

This chapter uncovers the often obscured connections between China and the expansion of America's 19th century national territories. By tracing the imagining, financing, and construction of the Transcontinental Railroad, I show how America's early commercial relationships with China in the late 18th century provided the context with which modern industrial development and western expansion processes unfolded. My argument is that during this period, American westward expansion was not limited to North America, but rather, involved the quest to establish U.S. presence in and across the Pacific Ocean. Advancements in transportation technologies like steamships and railways were indispensable mechanisms enabling these imperialist processes. By extending our understanding of U.S. westward expansion across the Pacific, I argue that the figure of China, and the "East" more broadly, were central features of continental expansion. As such, this analysis considers America's early encounters with China and processes of U.S. territorial expansion as mutually informed, using the transcontinental railways as a lens to clarify this relationship.

Situated in the late 18th century, the first section of this chapter demonstrates how the figure of China in the U.S. early republican cultural imaginary shaped the Transcontinental's construction. I begin by tracing America's early commercial ties with China following the Revolutionary War (1775-1783) to spotlight the ways in which China figured in the U.S.

imperial project. Through my survey of early national biographies featuring American merchants launching the Old China trade, I illustrate how China served as a critical setting for the development of what came to be known as American national character. My analysis of these historical narratives demonstrates how biographers, literary reviews, and the Old China merchants employed a range of discursive figurations of China not only to make these historical encounters legible and comprehensible to the American public, but also to imbue these trans-Pacific encounters with national significance.

Next, I explore the ways in which the Old China trade supported U.S. western frontier expansion, focusing specifically on the life of Asa Whitney, whose trip to China in 1842 impressed upon him the need for a highway connecting the Atlantic and Pacific coasts. This project became what was later known as the Transcontinental Railroad, described as a “belt of the globe” that would contain “the population and commerce of all the world.”⁶² One of the earliest and most fervent proponents of the Transcontinental Railroad, Whitney used the fortunes he amassed during his brief stint in China, during the First Opium War, to campaign and conduct land surveys mapping possible transcontinental routes. Strengthening commerce with China and facilitating western settlement were the twin principles guiding his railway project. Whitney’s relationship to China illustrates the global connections that facilitated America’s westward expansion, the drawing of its national boundaries, and the construction of national character. As I argue, the discursive construction of the figure of China in the post-Revolutionary period crucially informed Whitney’s framing of the Transcontinental as a gateway to China through which American national identity could be consolidated.

⁶² Dael A. Norwood, *Trading Freedom: How Trade with China Defined Early America* (Chicago: University of Chicago Press, 2022), 96.

Chinese Landscapes in Early American National Biographies

Upon the completion of the first Transcontinental Railroad in 1869, Americans thought deeply about war and its aftermath. Having ended only four years prior, many saw the Civil War and completion of the railroad in causal relation. As my study illustrates however, the seeds of the Transcontinental Railroad had been sown earlier, in the late 18th century following the American Revolution. Looking back to this period, John Haddad writes that even though America had broken the chains of British colonial subordination, many, both in the U.S. and abroad, doubted the new nation's political and economic viability.⁶³ Joyce Appleby explains that the Revolution could not provide a fragmented and heterogeneous group of colonists "the shared sentiments, symbols, and social explanations necessary for an integrative national identity."⁶⁴ This national identity would have to emerge out of "fresh experiences and opportunistic experiments," such as those in the commercial sphere.⁶⁵ As such, the early commercial ventures abroad afforded Americans with the capital to ensure their republic's economic stability, and also lent itself to the search for a cohesive American national identity. Thus, throughout the 18th and 19th centuries, U.S. republican character and foreign trade joined forces emerging as what Kendall Johnson describes as the "American romance of free trade in China."⁶⁶

Situated within this longer history, America's quest to establish foreign commercial relations deployed a discursive figuration of the 'East' in the making of its early national character. By employing the term "romance," Johnson's study shows how the figure of China was formed in early 19th century American literary culture. In the following pages, I trace the

⁶³ John Haddad, *America's First Adventure in China: Trade, Treaties, Opium, and Salvation* (Philadelphia: Temple University Press, 2014), 10-12.

⁶⁴ Joyce Appleby, *Inheriting the Revolution: The First Generation of Americans* (Cambridge: Harvard University Press, 2000), 240.

⁶⁵ Haddad, *America's First Adventure in China*, 12.

⁶⁶ Kendall Johnson, *The New Middle Kingdom: China and the Early American Romance of Free Trade* (Baltimore: John Hopkins University Press, 2017), 1.

ways in which the figure of China was constituted in *The Journals of Major Samuel Shaw* (1847) and the *Memoir of Thomas Handasyd Perkins* (1856), two pioneering texts in the early American literary canon. Although both biographies were published in the mid-19th century, their most climatic moments occur in the 1780s, with America's launching of their China trade. My reading of these texts demonstrates how early U.S. encounters with China bred a host of vocabularies through which America sought to distinguish itself from China in the face of these increasing unsettling foreign encounters. As I later show, these vocabularies of Chinese difference and the importance of commerce with China persevered into the 19th century and played a determining role in the construction of the transcontinental railways.

A military officer who initially served in the Revolutionary War, Samuel Shaw (1754-1794) also acted as the first U.S. Consul to China under President Washington's appointment to further American interests in Asia. The earliest biographical account of America's commercial and diplomatic voyages to China, *The Journals of Major Samuel Shaw* enjoyed a wide readership. In his journals, Shaw offers a thorough overview of the logistics of the China Trade, a broadening geographic understanding of Asia as he endeavored to establish trade networks with South and Southeast Asia for opium, and provides ethnographic observations of Chinese people and the despotic Middle Kingdom. More significantly, embedded in these ruminations are also his reflections on what it meant to be an American citizen representing a new nation for which he had fought. As his journals reveal, Shaw's conception of American character was thoroughly interlaced with the language of commerce.

One of the highlights in *The Journals* is Major Shaw's recounting of the *Empress of China*, a three-masted, square-rigged sailing ship initially built for maritime warfare but was refitted for commercial purposes, arriving in Guangzhou (Canton) in 1784, in the months

following the Revolution. Their victory over the British freed Americans from the British East India Company's monopoly over trade with China. No longer subject to the restrictive British Mercantile Laws that had prevented Britain's colonies from trading outside the metropole, the landing of the *Empress* in China had diplomatic, commercial, and metaphorical utility. Shaw explains that because theirs was the first American vessel to have visited China, "it was some time before the Chinese could fully comprehend the distinction between Englishmen and us."⁶⁷ After the American crew showed the Chinese merchants their map indicating their new territories which "conveyed to them an idea of the extent of our country, with its present and increasing population," "they styled us the *New People*," Shaw writes proudly. Shaw surmises that what warrants this distinction is the vastness of America's territories, and that they were "pleased at the prospect of so considerable a market for their own empire."⁶⁸ This American-made ship carrying an American crew and cargo was not only a triumphant symbol of American independence as the nation sought to distinguish itself from the British and Europe at large. As Shaw's journals relay, what was distinctive about American national character was its expansive territories, which Americans used as a symbol for its commercial potential. In this nationalist painting of the American voyage arriving in Canton, China serves as the backdrop against which Americans articulated national character.

Reflecting on the national significance of his voyage, Shaw contrasts China and America's respective approaches to trade. Juxtaposing their respective commercial strategies allows him to articulate what he perceives to be the fundamental differences that distinguishes the two civilizations. Shaw understood America's foreign commercial ambition and his courageous voyage to China as a direct reflection of their dynamic development and place on the

⁶⁷ Shaw, *The Journals of Major Samuel Shaw*, 183.

⁶⁸ Ibid.

civilizational hierarchy. In contrast, his description of China's restrictive Canton System betrays his view of the pagan people at large. Caught somewhere between civilization and barbarism, Shaw diagnoses China's ambivalence to foreign commerce as a consequence of their static unchanging nature, arrested by the "despotic nature of the government" that "would shock your humanity."⁶⁹ "From this painful view of the effects of despotism," Shaw writes, "I turn with pleasure to the contemplation of that happiness which an American enjoys, under the government of equal laws and a mild administration."⁷⁰ Here, overseas voyaging is framed as the concrete manifestation of American civilization's *changing* nature, and China is figured as the unchanging geographic setting onto which miniature dramas of American national and cultural discovery are staged.

Marveling at these first-hand narratives, Shaw's biographers write that "they throw a light on the commercial relations of our country with those distance regions at that period, which cannot fail to be interesting."⁷¹ They also contend that the journals are instructive, for although half a century had passed since these voyages took place, "from the unchangeableness of Chinese habits and policy, they undoubtedly contain much information, which even at this day, is both useful and attractive."⁷² This book "not only will be practically useful, but is due to the memory of their author, will redound to his honor, and will gratify a wise public curiosity concerning the early state and history of this branch of American commerce."⁷³ According to his biographers, the importance of this narrative is threefold: first, to satisfy "a wise" public curiosity and stimulate intrigue; second, to contribute to Shaw's repute; and lastly, to educate American

⁶⁹ Shaw, *The Journals of Major Samuel Shaw*, 184; 354.

⁷⁰ Ibid.

⁷¹ Josiah Quincy & Samuel Shaw, *The Journals of Major Samuel Shaw: The First American Consul at Canton* (Boston: Wm. Crosby and H.P. Nichols. 1847), vi.

⁷² Ibid.

⁷³ Ibid., vi-vii

readers on matters regarding Chinese habits and policy. In this pioneering text in the early American literary canon, the figure of China is center stage.

Throughout the 19th century, sketches like Major Samuel Shaw's proliferated throughout the country. Reverend Jared Sparks, the founder of *The North American Review*, America's first literary magazine, categorised this corpus of texts as "early national biographies."⁷⁴ Although these biographies drew from a variety of historical sources, they nevertheless "contain a fair amount of fiction as editors and authors interpreted source materials to script the moralizing success of individual national heroes."⁷⁵ Interweaving history with fiction in her discussion of this genre, Lisa Lowe proposes that these early biographical narratives operate in a mode of literary historiography which "constitutes, organizes, and gives structure, meaning, and finite contours to the historical past."⁷⁶ Early national biographies also engage with a range of discernable forms, systems, and rhetorics that establish and continuously reproduces literary conventions and modes of narration. Hayden White explains that logic of historical narratives succeeds through metaphor, by "endowing sets of past events with meanings, over and above whatever comprehension they provide by appeal to putative causal laws, by exploiting the metaphorical similarities between sets of real events and the conventional structures of our fictions."⁷⁷ By presenting historical events in a specific order in order make a comprehensible narrative out of them, White argues that "the historian charges those events with the symbolic significance of a comprehensible plot structure."⁷⁸ In short, early national biographies employ metaphor to rearrange complicated histories into comprehensible narratives that feature heroic

⁷⁴ Scott E. Casper, *Constructing American Lives: Biography and Culture in Nineteenth-Century America*, (Chapel Hill: University of North Carolina Press, 1999), 4.

⁷⁵ Johnson, *The New Middle Kingdom*, 16.

⁷⁶ Lisa Lowe, *The Intimacies of Four Continents* (Durham: Duke University Press, 2015), 138-39.

⁷⁷ Hayden White, *Tropics of Discourse* (Baltimore: Johns Hopkins University Press, 1978), 91-92.

⁷⁸ Ibid.

nationally representative individuals. In *The Journals of Samuel Shaw*, this narrative development is geographically extended and anchored to China. By adopting a trans-Pacific spatial framework onto which Shaw's drama of personal development is emplotted, the text makes China a central geographic feature of the narrative. In this space, contact with China is a plot device that propels the narrative, as well as the nation, forward. A genre unto itself, the proliferation of these biographical sketches and their mass publication speak to the enduring figure of China in the advancement of U.S. commercial interest, national identity, literary culture, and railroad imperialism.

In a telling review extolling Shaw's memoir, the *North American Review* enjoins readers into identification with the narrator, claiming that the Major's journals "illustrates one of the most pleasing characters that adorned the times of our great national struggle."⁷⁹ Through a variety of letters, obituary notices, and journal entries, his biographers emphasise Shaw's virtuous character in laboured descriptions of "his fine natural talents, elegant erudition, and social benevolence," which "gained him the esteem of a numerous acquaintance, and fitted him for extensive usefulness to society."⁸⁰ His biographers claim that Shaw "did not love property for its own sake, but as the means of making his benevolence more extensive."⁸¹ This extensive benevolence manifested in Shaw's encounters and commercial dealings with Chinese merchants, which "were regulated by the strictest honour, refined by the principles of philosophy and religion."⁸² Admired in this way, Shaw's biography proffers principled and benevolent commercial aspirations as a model for American character in times of national struggle. By

⁷⁹ Johnson, *The New Middle Kingdom*, 38.

⁸⁰ Quincy and Shaw, *The Journals of Major Samuel Shaw*, 126.

⁸¹ *Ibid.*, 127.

⁸² *Ibid.*

instilling individual experience with national significance, *The North American Review* refigures Shaw's commercial interest into patriotic spirit and directs readers towards China.

Shortly after the *Empress of China* returned from its maiden voyage, Thomas H. Perkins (1764-1854), a successful Boston merchant, sailed to Canton carrying ginseng harvested from arboured Appalachian mountainsides and sea-otter pelts obtained through trade with Indigenous hunters in the Pacific Northwest region.⁸³ Whilst Major Shaw was fighting in the Revolutionary War, Perkins was busy building a trading empire. With the support of his grandfather, a successful merchant who dealt in fur, throughout the 1780s, Perkins and his brother traded in enslaved peoples from Haiti and goods produced by their labour. Seeking to expand his company's commercial activities into China, Perkins arrived in Canton in 1789, establishing one of the earliest and most sustained commercial relationships between America and China in the post-Revolutionary period.⁸⁴ Although the Perkins brothers initially traded in ginseng and furs, by 1811, they were regularly trading in opium harvested from Turkey.⁸⁵ Evidently, their dealings in the opium and slave trade did not seem to bother the reviewers at *The North American* because they celebrated the memoir, proclaiming that it "ought to be in the hands of every young merchant and merchant's clerk in the country because it presents in many important aspects a model character—not only that deserves to be, but one that can be, imitated."⁸⁶ Perkins' moral

⁸³ Johnson, *The New Middle Kingdom*, 39.

⁸⁴ For a discussion of the Perkins' family's commercial dealings in China, see: Jacques Downs, *The Golden Ghetto: the American Commercial Community at Canton and the Shaping of American China Policy, 1784-1844* (Hong Kong: Hong Kong University Press, 2015); James R. Fichter, *So Great a Proffit; How the East Indies Trade Transformed Anglo-American Capitalism* (Cambridge: Harvard University Press, 2010); John Haddad, *America's First Adventure in China: Trade, Treaties, Opium, and Salvation* (Philadelphia, Temple University Press, 2013) & *The Romance of China: Excursions to China in U.S. Culture, 1776-1876* (New York: Columbia University Press, 2008); Kendall Johnson, *The New Middle Kingdom: China and the Early American Romance of Free Trade* (Baltimore: John Hopkins University Press, 2017).

⁸⁵ Michael E. Chapmen, "Taking Business to the Tiger's Gate: Thomas Handasyd Perkins and the Boston-Smyrna-Canton Opium Trade of the Early Republic." *Journal of the Royal Asiatic Society* 52 (2012): 7-28.

⁸⁶ Johnson, *The New Middle Kingdom*, 60.

character can be emulated because his actions, thoughts, observations, are recorded and can be interpreted. Like an instruction manual, these merchant biographies transform a particular mode of interacting with China into a conventional narrative of personal and national development.

While Shaw's biographers explicitly cited the edifying value of his text in satisfying a curious American public in regards to Chinese habits and policy, Perkin's biographers do not intervene in the same way. Rather, they play a more subtle role arranging a scattering of Perkins' personal ruminations and observations of Chinese people across each chapter, thereby interweaving the narrator's character development with his ethnographic observations. On the subject of Chinese character, he writes, "'tis true, they smile; but it appears to be more out of complaisance to you than from a natural impulse. It is certain the softer passions are not so visible in them as with us."⁸⁷ In delineating "them" from "us," Perkins distinguishes between the subject of the narrative and the voice that transcends the narrative. His observations articulate a transcendent "us," that positions Chinese people as the subject through which an "us" can emerge. The Chinese, he surmises, "do not appear to have the passions which govern men in general."⁸⁸ Instead, "they have no fellow-feeling at the suffering of those around them in distress; they pass by without a look, or even a thought."⁸⁹ Marked by the absence of liberal sympathetic feeling, Chinese character is the object, rather than subject of the biographical sketch.

For the reason that the Chinese do not appear as "men in general," Perkins cautions Americans to be wary of their encounters with Chinese, particularly when dealing with them commercially. "Great care, however, is to be used in purchasing from them," he forewarns. Chinese people "will deceive you," "so that it is necessary to have one's eye well about one to

⁸⁷ Thomas G. Cary & Thomas Handasyd Perkins, *Memoir of Thomas Handasyd Perkins, Containing Extracts from His Diaries and Letters: With an Appendix* (Boston: Little & Brown. 1856), 35.

⁸⁸ *Ibid.*, 34.

⁸⁹ *Ibid.*

deal with these people, the character of whom is to me unfathomable.”⁹⁰ Teaching his readers to be wary and alert against the unfathomable Chinese, Perkins’ memoir gives voice to the ways in which America’s early commercial encounters with China invested in a host of scrutinising behaviours that sought to distinguish Chinese from American civilizational character. These distinctions were successively produced through the transgressing of national boundaries and the traversing large geographical expanses.

My reading of the two historical narratives spotlights how the growing trade networks between China and America in the post-Revolutionary period were used to emplot national character. Shaw and Perkins’ biographers rearranged disparate historical materials and fashioned them into cohesive and comprehensible narratives that presented various sets of historical events, as Lowe and White explain, through the conventional structures of our fictions. Their narration of personal development through dramatically paced stories served an instructive function, providing a range of conducts and manners to help guide Americans in their performance of national character. In both sketches, China serves as the narratives’ geographical setting and Chinese people the objects through which the narrative and national subject emerges. The figure of China in these texts employ and establish a range of discernable forms, systems, and rhetorics that helped Americans translate, interpret, and represent these new spaces and encounters. Shaw’s description of the despotic empire, his biographers’ portrait of China’s unchanging habits and policy, and Perkins’ evaluation of Chinese inscrutability – each put these narrative conventions and modes of textual representation on display. They are examples of how the figure of China was employed as a metaphorical vehicle for narrating American democracy, their dynamic development, and sympathetic fellow-feeling. Here, American character is

⁹⁰ Ibid., 38.

simultaneously constructed by a world that lies beyond its borders, and also by processes that relay across these borders, like trade.

The Old China Trade and Infrastructures of Western Expansion: Asa Whitney's Pacific Highway Campaign

If early national biographies offered China as a site of character development, there was perhaps not a better time for a merchant like Asa Whitney to be compelled by this proposition, having already buried two wives, lost a child, and his properties in New York foreclosed by the age of forty-five. Thus, on June 18th, 1842, Whitney sailed to China with the hopes of changing the course of his own narrative arc. Nine weeks into his journey, he writes melancholically in his diary that “it certainly is a great trial at my time of life, to recommence the work, too in a strange Land. Yet I hope it is Gods providence that guides me & I feel that I shall succeed. I hope above all things that I may be enabled to do some good to mankind & in some small degree make amends for the abuse of all Gods providences to me.”⁹¹ China—this “strange land”—is the setting for his character development and site of individual redemption. To “succeed,” “make amends,” “to do some good to mankind,” Whitney maps his salvation onto China.

Born into a large and prominent lineage of New England farmers and manufacturers, Asa Whitney's interest in trade was something of an anomaly. His distant cousin, Eli Whitney, had combined their family's farming and manufacturing legacies with his invention of the cotton-gin. At the age of fifteen, Whitney moved to New York and over the course of two decades, became a relatively successful merchant importing dry goods, spending several years abroad in Europe as a

⁹¹ Whitney, Asa. “Diary of Asa Whitney, 1842-1844 [Typescript].” Edited by Margaret L. Brown, 1930. Transportation History Collection, Special Collections Library, University of Michigan, 4. Quoted in Bain, *Empress Express*, 48.

procurer for F. Sheldon and Company. During his time in England, he travelled on the Liverpool and Manchester Railway, the first inter-city railway in the world. When he returned to the United States, Whitney rose to partner at the firm, and later started his own trading company. By 1836, not only did he own multiple tracts of land in New Rochelle, but also owned a large commercial plot in Lower Manhattan, where he built five wholesalers' buildings.

The path that eventually led him to China began during a period of major depression in the United States, sparked by the Panic of 1837. The 1837 crisis followed a particularly prosperous period of economic expansion beginning in 1834, due to burgeoning international trade, lucrative land sales, productive cotton exports, and British investments in America's westward expansion and infrastructure development. By 1836 however, the directors at the Bank of England began to notice that all the capital speculation and investment in American infrastructure development over the previous decade had depleted its monetary reserves. Due to British hegemony over the American economy, when the English directors proposed raising interest rates to address its low reserves, banks in the United States were forced to do the same.⁹² For someone who had multiple mortgages, rising interest rates was particularly ruinous. Months later, his wife, Sarah Whitney died following a miscarriage. Thus, "in an antipodal frame of mind," David Bain writes, Whitney had "but one word in his head: China, a place of dawning commercial promise where one could start anew."⁹³

Through his grief, Whitney managed to secure for himself employment as a purchasing agent for several New York firms trading in China. He packed a trunk full of books for his long

⁹² For a discussion of the Panic of 1837, see: Howard Bodenhord, *State Banking in Early America: A New Economic History* (Oxford: Oxford University Press, 2003); Alejandra Irigoin, "The End of a Silver Era: The Consequences of the Breakdown of the Spanish Peso Standard in China and the United States, 1780s-1850s," *Journal of World History* 20, no. 2 (2009): 207-243; Jessica M. Lepler, *The Many Panics of 1837: People, Politics, and the Creation of a Transatlantic Financial Crisis*, (Cambridge: Cambridge University Press, 2013).

⁹³ David Haward Bain, *Empire Express: Building the First Transcontinental Railroad* (London: Penguin Books, 2000), 38.

voyage including missionary and British Consul to China, George Tradescant Lay's *The Chinese as They Are: Their Moral, Social, and Literary Character* (1841), the life and writings of one of Founding Fathers, John Jay,⁹⁴ a biography of Napoleon Bonaparte, and the renowned British abolitionist, William Wilberforce's *Family Prayers* (1836).⁹⁵ Published only a year prior to Whitney's departure, Lay's text was the most recent addition to the growing collection of missionary writings on China and Chinese character. Lay's ruminations on Chinese physiognomy must have been particularly interesting to Whitney, who would later feature in America's leading phrenological journal.⁹⁶ In addition to these personal belongings, his ship was also loaded down with lead ingots, most of its cargo, making his trip particularly arduous. While voyages to China from New York harbours usually needed 100 days, and newer ships 79 days, Whitney's journey took a record-breaking 153 days, the longest trip recorded that year.⁹⁷

As Whitney's diary entries reveal, his voyage to China gave him the chance to contemplate moral character by chastising his only social companion, Captain's Eyre's insolent exploits on their voyage. Whitney carped against the captain's penchant for cigars, complaining that their shared quarters were always filled with its smoke. "What a vile practice," he confided to his diary, "so useless, yes worse, so injurious to health & habits, for I have always found it creates a disposition to drink, if not to drunkenness, & so disagreeable to those who dislike it: that I sometimes think no real gentlemen can smoak."⁹⁸ On the captain's tendency to launch into lengthy and profane diatribes against crewmembers, Whitney remarked, "very disagreeable, presumptuous & wicked."⁹⁹ In addition to the steady stream of verbal abuse hurled at the crew,

⁹⁴ His wife, Sara Jay Munro was the daughter of Peter Jay Munro, New York merchant and nephew of John Jay.

⁹⁵ Ibid.

⁹⁶ Article LXXI: Phrenological Character of Asa Whitney, with a Likeness," *American Phrenological Journal* 11 (November 1, 1849): 329–333.

⁹⁷ Bain, *Empire Express*, 16.

⁹⁸ Bain, *Empress Express*, 42.

⁹⁹ Whitney, *Diary*, 7-8.

Captain Eyre had also taken to whipping a Chinese crewmember, who he charged with being drunk one morning during breakfast. “I did not see it & could not & I cannot bring my mind to believe in the necessity of such a discipline anywhere” Whitney wrote.¹⁰⁰ “It is too humiliating, too degrading, too beastly, poor fellow I do feel for him [...] these poor Chinese seem to be considered but dogs only fit to be kicked and flogged; this our Americans have learned from the English.”¹⁰¹ Whitney’s description of the captain’s vulgarity as something of an English inheritance, does not vindicate the captain’s conduct, but instead, attempts to explain it. By attributing the captain’s insolence to the English, Whitney’s voyage to China is an opportunity to ruminate upon what he considered to be principled and benevolent America character distinct from their former empire’s.

Whitney not only held Captain Eyre and the British as morally reprehensible, but other European powers as well. After 107 days at sea, Whitney’s ship stopped at Java, where he witnessed the Dutch subjugation of Javanese. Observing this cruelty, he writes, “Oh how long must the mighty oppress & brutalize the weaker,”

When I see human beings in such oppressive ignorance & servitude, I cannot but feel that they were created for a more noble & exalted purpose & the that the purposes of a wise Creator are turned by the ambition & lust of Man or preparation of Nations perhaps for their eternal destruction, look at Spain, look at Portugal, & even Look at England too her time is almost come. Her starving millions will not be willing to starve much longer, her wailing day must come & awful must be that day.¹⁰²

The colonial subjugation of the Javanese reflects the “oppressive ignorance & servitude” of European powers which will lead to their atrophy and “eternal destruction.” In this dichotomy of powers between the mighty and the weak, Whitney figures the United States as a global

¹⁰⁰ Ibid., 12.

¹⁰¹ Ibid., 16.

¹⁰² Ibid., 27.

mediating power who will bring those European empires debased by ambition and lust to their judgement day.

This narration of Whitney's broadening understanding of global imperialisms marks a critical turning point in his life's work. Thus, as Margaret Brown observes in her reading of his diaries, Whitney not only "expressed his impressions of [the journey's] disagreeable confinement," but more significantly, "recorded philosophical convictions on the futility of material gain and spoke of the desire to become connected with some activity which would benefit the world at large."¹⁰³ Perhaps it was this growing belief in the futility of material gain, ignited by the 1837 crisis, that makes for the paucity of Whitney's records detailing his commercial activities in Canton. Nevertheless, it is evident that Whitney was relatively successful in his business dealings, as he returned to New York in less than two years with enough money to live comfortably until his death. His journey home was also uncomfortable and unusually long, but it gave him time to draft an idea that would prevent others from having to endure the torturous journeys he had by now, suffered twice. This project was the transcontinental railway, what he called the "belt of the globe" that would contain "the population and commerce of all the world."¹⁰⁴

Although Whitney was not the first to envision the transcontinental railway, he was the only one who deliberately and systematically worked for the idea.¹⁰⁵ It is even said that a young Leland Stanford, who would later lay the Transcontinental Railroad's golden last spike, heard Whitney expound on his vision to his father.¹⁰⁶ After seven years of surveying, campaigning, and

¹⁰³ Brown, "Asa Whitney and His Pacific Railroad Publicity Campaign," 210.

¹⁰⁴ Dael A. Norwood, *Trading Freedom*, 96.

¹⁰⁵ *Ibid.*, 209.

¹⁰⁶ *Memorial Addresses on the Life and Character of Leland Stanford* (Washington: US Government Printing Office, 1894), 11. Quoted in Chang, "Global Perspectives," 30.

mapping, this was the plan he came up with: that the government set aside 60-mile strips of land along his proposed route from Lake Michigan to the Pacific coast; proceeds from sale of this land would finance the construction of the road; that commissioners should be appointed by the government to sell the land; title to the land would not be vested to them alone, until the railway had been completed for twenty years, when all the “surplus” land would be turned over to them as a reward for their services; settlements would grow around the railway; the nation advance westward; commerce with the East secured.¹⁰⁷ If Major Shaw’s journals used China as the setting for national development, and Perkins’ memoir used Chinese people to distinguish model character, Whitney’s railroad proposal draws on both these discourses and contributes to them as well. What he adds to the romance of the Far East is the romance of the Far West.

For someone without formal engineering training, no influential political contacts, or campaigning experience, his venture was ambitious and, in the end, only partially successful. Thus, Gordon Chang remarks that “his most powerful argument in favor of the huge project drew not from accounting calculations but from a dramatic historical imagination that bordered on the millennialist.”¹⁰⁸ Henry Nash Smith’s reading of the proposal also characterises Whitney as a sensationalist, who touched upon “the familiar theme of how the Asiatic trade would in turn bring the United States to a peak of unexampled and permanent grandeur.”¹⁰⁹ The romance of the China had indelibly shaped his dramatic historical imagination and left its mark on the western frontier. His trip to China, like Shaw’s and Perkins’ before him, had indeed changed the course of his narrative and led him back to America. His life had spatial movement and upward ascent. His narration of real life events falls into a conventional linear plotline. Not only had he made a

¹⁰⁷ Brown, “Asa Whitney and His Pacific Railroad Publicity Campaign,” 211.

¹⁰⁸ Chang, “Chinese Railroad Workers and the US Transcontinental Railroad in Global Perspective,” 30.

¹⁰⁹ Henry Nash Smith, *Virgin Land: The American West as Symbol as Myth* (Cambridge: Harvard University Press, 1970), 33.

lifetime's worth of money in a little over a year, but he was also prudent with it, using it to enrich mankind rather than himself. China is a part of his character development, the Pacific Ocean where he receives his greater calling, and America's western geographies the stage onto which his moral development plays out.

Having capitalised on the romance of the East, his wealth from the China trade allowed him to focus his energies solely on the transcontinental railway and America's western expansion for the benefit of mankind. Whitney's diaries divulge the extent to which the project consumed him. Sitting on a train in Albany, shortly after his return from China, he looks out the window and writes that although he had been excited to see the sights, "alas, in vain, time & space are annihilated by steam, we pass through a City a town, yea a country, like an arrow from Jupiters Bow."¹¹⁰ And if one were to ask him of his impression of these places, his only response is this: "I have no memorial, I know nothing of it."¹¹¹ He also writes,

Oh, this constant locomotion, my body & everything in motion, Steam Boats, Cars & hotels all cramed & crowded full the whole population seems in motion & in fact as I pass along with Lightning speed & cast my eye on the distant objects, they all seem in a whirl nothing appearing permanent even the trees are waltzing, the mind too goes with all this, it speculates, theorizes, and measures all things by locomotive speed, where will it end.¹¹²

In this dizzying modern world, nothing appears permanent or absolute, and even the trees are made to dance. Crammed and crowded, the population is indistinct. Technology has set his body and mind in constant locomotion. Yet unable to escape the railroad's rhythms, he paradoxically turns to the very contrivance that set his world spinning "like an arrow from Jupiters Bow."

Hoping to bring this troubling annihilation of time and space to an end, Whitney's project involves making the world recognisable again by reinscribing spatial boundaries and establishing

¹¹⁰ Whitney, *Diary*, 71-72.

¹¹¹ Ibid.

¹¹² Ibid.

social and political differentiations. By looking at Whitney's railroad proposal, in what follows, I illustrate how he offered the railroad as a vital gateway to China through which Americans could transcend their political differences and as an opportunity to establish new social structures to secure their bonds.

Acting "On Behalf of This Great Union"

In 1845, standing in front of U.S. Congress with his proposal, titled "A Project for a Railroad to the Pacific" in hand, Whitney opened by situating his railway in a global framework: "Considering, as I do, the subject of a railroad communication directly across our continent to the Pacific Ocean as of vast importance, not only to the people of these United States, but also to all the world, I have, therefore, felt it my duty to place before my fellow-citizens the whole subject."¹¹³ Stationing the railway "directly across *our* continent," his address shows how early Americans related to the world not only in geographical terms, but in civilisational ones that categorised races, languages, and religions hierarchically. By situating the railroad and its corollary revolutionary influences on U.S. territory specifically, Whitney's memorial reveals the process by which Americans instrumentalised its geographies to ascend this hierarchy. For it was not only Americans who would benefit from the transcontinental highway, but "all the world." Allowing the rest of the world to enjoy the advantages of the railway, Whitney figures America as a global benefactor. In this global order, railroad construction is an opportunity to develop and refine U.S. national character through a public display of altruism – a chance to demonstrate to the world something akin to Shaw's extensive benevolence and Perkins' model character. "The lands are yours, the right to sale or grant yours, and the glory will be yours also," he says, "I ask

¹¹³ Asa Whitney, *A Project for a Railroad to the Pacific* (New York: George W. Wood, 1849), iii.

it for your benefit, and that of every man, woman and child of our great nation. I give it my life, my all.”¹¹⁴ The ever important distinction between “us” and “them” structuring early national biographies, is here, reinvigorated by his positioning of “you” into “our great nation” revealing the ways in which Whitney interpolated his audience as national subjects.

In outlining his project’s three primary objectives, Whitney draws on the romance of commerce with China as a means of achieving national identity and consolidating national unity invoked in early national biographies. Whitney states that the first great object of his project is to reroute the course of commerce between Europe and Asia through America, “and force it, from interest, to pay tribute to us.”¹¹⁵ The second, is to establish a stable and cheap means of transit bringing American goods to Europe, “with her 250,000,000 souls on the one side,” and Asia, “with 700,000,000 of population” on the other. The third object is to strengthen communication and transit networks with America’s western territories and “thereby bind them to us by interest and affection.”¹¹⁶ Without a transcontinental highway to secure the western frontier’s integration and reliance on America, Whitney fears “that they will be obliged to separate from us and form an independent nation.”¹¹⁷ As it is outlined here, Whitney’s transcontinental enterprise combines the quest to transform global commerce and secure national unity into a singular project. Railroad infrastructure in this instance is simultaneously the combination of its constituent material components as well as a symbol of national character. Indeed, if the map Major Shaw shows to the Chinese upon the arrival of the *Empress of China* in China functions as a symbol of America’s commercial provenance and market potential, Whitney’s railway is a means of furthering and bringing this commercial potential to life.

¹¹⁴ Ibid., 42.

¹¹⁵ Ibid., 13.

¹¹⁶ Ibid.

¹¹⁷ Ibid.

Situating his project in global framework, Whitney offers the railroad as an opportunity for America to overthrow England's dominance over global commerce. England's great strength "is in her merchant marine, with the naval force to protect it, enabling her, at short notice, to send her armies and fleets to all parts of the world and pounce upon her prey."¹¹⁸ By rerouting England's commerce with Asia through America, Whitney claims that the railroad will reduce England's profits by one third, while at the same time increasing America's. In this competition between the old world and the new, transportation technology is the terrain upon which this competition is fought. With railroad technology overtaking naval technology, "what a blow, what a reduction to England's power!" he exclaims. The sensationalist tendencies Chang and Nash observe in Whitney's proposal is registered here through his imprecise use of language: "the opening of a free, cheap, and frequent intercourse with Japan, with China, with all the islands of the Pacific and Indian Oceans, and with India, would open to us a commerce, in variety and extent, far beyond the power of human calculation to estimate."¹¹⁹ Affixing place after place to augment the railroad's reach, Whitney's geographic frame of reference is so fluid that it is no wonder that he describes the railroad's advantages as "far beyond the power of human calculation." Rather than a concrete programme specifying how these commercial relations will be established or maintained, rich commerce with Asia instead functions as a trope that Whitney depends on throughout his proposal. As I have demonstrated in my survey of early national biographies, this trope is rooted in the discursive romance of the East developed in the post-Revolutionary period.

Throughout his speech, Whitney rehearses the railway's logic by using the language of calculation and measurement to articulate its global significance. The road will force open

¹¹⁸ Ibid., 40.

¹¹⁹ Ibid.

commerce and intercourse of Europe with Asia “by a shorter and cheaper route to adopt it.”¹²⁰ It will also open “a means of transit for all our products to the markets of Asia,” transform wilderness into “settlement and production,” and make California into “the great depot for our products, on their way to the markets of all Asia, and also for the depot for the commerce for all the world.”¹²¹ By measuring the wilderness by its productivity, the western states by its commercial function, and proximity to Asia by its markets, the value of the Transcontinental Railroad is formulated by its price. Whitney might have been disenchanted with material wealth, but he could not escape its calculating procedures and his proposal measures all things by locomotive speed.

After his memorial was published, Whitney embarked on a western expedition to survey and confirm his route’s practicality, before travelling across the country attending meetings, railway conventions, legislative assemblies – all whiles barraging Congress and prominent newspapers for support. Throughout his campaign period, Whitney adapted his plan in response to both international and domestic events. Following the Treaty of Wangxia (中美望夏條約) in 1844, which the American administration negotiated with the Daoguang Emperor granting the United States trading rights equal to those accorded to the British empire, including access to new treaty ports, extraterritorial rights, and the right to evangelise, the presence of new groups of American merchants, missionaries, and diplomats regularly reported on China’s economic and political importance to the incipient nation. He kept a close watch on these events, read these materials dutifully, and compiled this information on China in his railroad pamphlet.¹²²

¹²⁰ Ibid., 16.

¹²¹ Ibid.

¹²² Ibid., 77-82.

Domestically, the annexation of Texas in 1845, the Oregon Treaty that settled competing American and British claims to the region in 1846, and the subsequent California Gold Rush did much to settle the debate on the necessity of a Pacific railroad in the public sphere. In 1848, following the Mexican-American War and the annexation of California, Whitney added another terminus in San Francisco to his original route. His plan sparked animated debates across the country, and by 1849, a majority of states had passed resolutions supporting the project. The editors of the *Western Journal* described how they came to be persuaded by Whitney's project because of these historic events—both international and domestic. “The project of a railroad to the Pacific that a short time ago appeared so like the offspring of a disordered imagination,” was now, the journal concluded, “a work of national necessity.”¹²³ In the political sphere, Dael Norwood also notes that a transcontinental highway opening up “the rich commerce of Asia” was by 1856, a cornerstone of both Republican and Democratic party platforms, a rare point of agreement in antebellum politics.¹²⁴ If the romance of China provided a disparate group of colonists with an integrative national identity in the post-Revolutionary period, the figure of China in Whitney's proposal shows how China's rich commerce continued to be levied to finance western expansion, and also to solve the persistent problem of union throughout the 19th century. Norwood argues that this is because the debate over the transcontinental coincided with late antebellum politics and incurred its divergent interests. Choosing a route required decisions about which section would be favored by the road and who would control nearby land, therefore raising the question of slavery in the western territories, which in turn, offer new opportunities

¹²³ “Art. II—A Rail Road from the Atlantic to the Pacific,” *Western Journal* 1, no.7 (July 1848): 351. Quoted in Norwood, *Trading Freedom*, 102.

¹²⁴ *Ibid.*, 101.

for quibbling about the legitimacy of the federal government's power which would not be settled even long after the Civil War.

Repeatedly referring to these factional debates that were obstructing him from carrying out his great plan, Whitney encourages Americans to think beyond their moral inclinations and political allegiances by belabouring the importance of national unity. He asks that his proposal be considered “for the glory of our country, and for the preservation of our Union to the Pacific.”¹²⁵ He claims that he has “no desire that it should benefit one section of our Union over another, and I feel that I am acting for all this great Union.”¹²⁶ Later insisting again that “a work like this, I would not undertake it for one section, or for one interest; for I believe that we have a destiny to accomplish with it.”¹²⁷ What happy effects the railway will bring, by the opening of this great road across the heart of the country, “importing abundance, and infusing a spirit of happiness and peace; cementing the bonds of union, and placing them on a firm and imperishable basis.”¹²⁸ U.S. Congress concurred with Whitney, stating in their report that “in the opinion of the committee, this road will bind these two great geographical sections indissolubly together, to their mutual advantage, and be the cement of a union which time will but render more durable, and make it the admiration of the world.”¹²⁹ Congress also expressed their hope that the fresh experiences and opportunistic experiments that helped form the romance of China in the early republican imaginary could also be renewed through Whitney's project, not only “to consolidate our union,” but also to “give a fresh impetus to our great agricultural, manufacturing, and

¹²⁵ Whitney, *A Railroad to the Pacific*, 1.

¹²⁶ *Ibid.*, 42.

¹²⁷ *Ibid.*, 51.

¹²⁸ *Ibid.*

¹²⁹ U.S. Congress, House of Representatives, *Railroad to Oregon: Report No. 733 (to Accompany H.R. Bill No. 468)*, 13th Congress, 1st Session, June 23, 1848.

commercial interests.”¹³⁰ Both Congress and Whitney harness the transcontinental as a means to rest the body politic on “more durable” foundations, and to make its connective tissue “firm and imperishable.” Whitney, who had once saw the world around him “in a whirl,” with “nothing appearing permanent,” clarifying and cementing a basis for national union and developing national character, was the country’s most urgent task. Without a highway to bring Americans together, mankind will be under the “derangement of the machine” and “fall back into darkness and savage barbarism. This is inevitable.”¹³¹

Neither the first nor the most successful venture supported by dreams of inaugurating a new era of America’s hegemony over Pacific trade, Norwood suggests that what made Whitney’s proposal exceptional, and analytically useful, is the way that it helped shift the political conversation toward transcontinental infrastructure. Indeed, Whitney’s memorial to Congress in 1845 ignited a subsequent deluge of transcontinental railway proposals, prompting what Craig Miner describes as an entire industry dedicated to proposing Pacific railroads.¹³² These proposals were undertaken by opportunistic politicians, enterprising capitalists, and land speculators, all of whom disagreed on many key articles, including what route the railway should take and where its termini ought to be built.¹³³ Amid these clashing debates however, one thing remained constant, “all the plans on offer agreed on the road’s motivation: to capture Asia’s trade for the United States.”¹³⁴ The romance of China, born out of the post-Revolutionary period, played an important part in determining the tenor of this conversation. The China trade not only provided him the funds to carry out his mission, but also shaped how he envisioned the railway’s

¹³⁰ Ibid.

¹³¹ Whitney, *A Railroad to the Pacific*, 42.

¹³² H. Craig Miner, *A Most Magnificent Machine: America Adopts the Railroad, 1825-1862* (Lawrence: University Press of Kansas, 2010), 232.

¹³³ Norwood, *Trading Freedom*, 103.

¹³⁴ Ibid.

material and symbolic function. As I have shown, Whitney was not the first American who dreamed of commerce with China as a means to overcome domestic discord. That Americans were so easily compelled by this idea when Whitney proposed it, only speaks to the enduring figure of China as a site for character development in times of crisis. Drawing on a long discursive legacy that positions China, and the Pacific Ocean, as the setting for emergent American character, Whitney also geographically extends the romance of China onto the western frontier.

As Whitney reminds his readers in the conclusion of his memorial, “commerce with Asia has, since before the time of Solomon even, changed the destinies of Empires and States. It has, and does to this day control the world.”¹³⁵ Echoing this sentiment was George Wilkes, a rival railway promoter who boldly claimed in his transcontinental proposal two years later, “it is not necessary to dwell at any length upon the value of the Commerce of the East. For ages it has stood pre-eminently precious above that of all other portions of the globe, and has conferred both opulence and power upon every nation which has engrossed it.”¹³⁶ If commerce with Asia is a metaphor for empire’s futures, by figuring the transcontinental as a gateway to China, Whitney’s proposal (and the proposals thereafter) not only makes railroad development the primary vehicle to secure America’s destiny, but uncovers the process with which America sought to articulate its national character and establish its place in a global world order. In the following chapter, I elaborate upon the Transcontinental Railroad’s ties to China by exploring how the Transcontinental, as a vital gateway to commerce with China and a means of articulating

¹³⁵ Ibid., 39-40.

¹³⁶ George Wilkes, *Project of a National Railroad from the Atlantic to the Pacific Ocean for the Purpose of Obtaining a Short Route to Oregon and the Indies*, 4th ed. (New York: Daniel Adey Printer, 1847), 3.

American national character inspired railway development in China and conceptions of Chinese national identity.

CHAPTER THREE – DESIRING NATION, DESIGNING INFRASTRUCTURES: CHINA’S EARLY RAILROAD DEVELOPMENT

As a boy he had come to the shores of America, worked his way up, and by dint of painstaking study after working hours acquired the Western language and Western business ideas. He had made money, saved money, and sent money home. The years had flown, his business had grown. Through his efforts trade between his native town and the port city in which he lived greatly increased. A school in Canton was being built in part with funds furnished by him and a railway syndicate, for the purpose of constructing a line of railway from the big city of Canton to his native town, was under process of formation, with the name of Spring Fragrance at its head.
— Sui Sin Far, “The Inferior Woman” (1912)

The epigraph that opens this chapter is an excerpt from the story “Inferior Woman” in *Mrs. Spring Fragrance* (1912), a short story collection by Edith Maude Eaton, written under the pen-name Sui Sin Far. Here, the narrator describes her husband, Mr. Spring Fragrance, a character that bears uncanny biographical similarities to the Chinese railroad baron, Chen Yixi (1844-1929).¹³⁷ Like Mr. Spring Fragrance, Chen emigrated to America from China at a young age, when he was only sixteen years old. Chen arrived on American shores in 1862, a few short months before the Transcontinental Railroad began construction. Along with the tens of thousands of Chinese migrant labourers employed by the Central Pacific Railway Company, Chen helped build the western portion of the first Transcontinental from Sacramento, California towards Promontory Summit, Utah. Unlike the majority of the Transcontinental’s workers however, Chen also quickly rose in ranks, not only becoming a successful merchant but also a labour broker, supplying companies building new branches of the Transcontinental with Chinese

¹³⁷ William N. Prather, “Sui Sin Far’s Railroad Baron: A Chinese of the Future,” *American Literary Realism, 1870-1910* 29, no. 1 (1996): 54-61. Prather offers a detailed elaboration of the biographical similarities between Mr. Spring Fragrance and Chen Yixi. Furthermore, because Sui Sin Far and Chen Yixi’s residence in Seattle coincided with one another, Prather speculates that Sui Sin Far must have often heard stories about him, and that it is likely that the two had an occasion to speak with one another.

workers. But the most compelling connection tying Mr. Spring Fragrance to Chen Yixi is the railroad syndicate in China, “for the purpose of constructing a line of railway from the big city of Canton to his native town.” This project was the Xinning Railway (Sun Ning), the only railway headed by a Chinese migrant in America at the time of the *Mrs. Spring Fragrance*’s publication.

This chapter explores how the Transcontinental Railways, as a vital gateway to commerce with China and a means of articulating American national character, inspired infrastructural development in China and conceptions of Chinese national identity. To analyse the relationship between the Transcontinental and railway construction projects in China, I focus on the envisioning, financing, and construction of the Xinning Railway in early 20th century China. Not only the first railroad designed by a Chinese migrant in America, the Xinning Railway was also one of the first railways built in southern China funded solely by private Chinese capital in the early 20th century. Prior to 1911, most railways in China were either constructed by foreign powers or with foreign capital. In this context, that the Xinning Railway operated entirely under Chinese management and financed by Chinese capital symbolises a critical turning point in the development of a national railway system. While studies of railroad development in the late Qing and early Republican periods tend to focus on the semicolonial context under which railways served as “the most visible manifestation of the imperialist presence in the Middle Kingdom,”¹³⁸ and thus a site of anti-imperial struggle through which a modern Chinese nation-state emerged, I propose a more capacious approach that not only accounts for how the semicolonial context in Qing China shaped railway development, but how Chinese people, and Chinese overseas migrants who laboured on the transcontinental railways specifically, were also agents in the railway and nation building process.

¹³⁸ Huenemann, *The Dragon and the Iron Horse*, 2.

Motivated by the vision that his native Taishan (Toisan) could serve as an excursion to the broader world and transformed into a prosperous global commercial centre akin to Seattle, my examination of the Xinning Railway highlights the ways in which Chinese migrants took inspiration from America's railroads in the hopes of strengthening and developing China. By canvassing an array of proposals seeking funding for the railroad, I show how Chen galvanised support for his project by framing it as a national enterprise free from foreign interference. But for a project so explicitly anti-foreign, curiously, it was overseas Chinese migrants—particularly those living in the United States—who provide to be the most ardent supporters. Thus, despite his best efforts to frame his enterprise as a national one, I argue that Chen's railway was in fact the product of global flows of capital, labour, and infrastructures. By charting the connections between the Transcontinental Railroad and Chinese railways, I offer the Xinning Railway as an infrastructural medium to explore the development of a national transportation system beyond the confines of national borders. Rather than adopting a comparative approach that juxtaposes China's railways with other national railway projects, my analysis develops a relational approach that situates China's infrastructures and the historical development of a Chinese national consciousness within a global system.

To analyse the relationship between the Transcontinental Railroad and the Xinning Railway, first, I begin by providing a historical overview of China's early railroad development. Specifically, I focus on the construction and the dismantling of the Shanghai-Wusong Railway (Woosung), the first railroad to operate commercially in China, headed by the British trading firm Jardine Matheson & Company. Because the railway was built without the Qing's sanction, it was promptly dismantled, and its remnants taken to the island of Taiwan. Through my reading of Augustus Hayes' essay "The First Railroad in China," I show how Americans perceived the

Qing's dismantling of the Shanghai-Wusong line by employing many of the same tropes invoked in early national biographies and Asa Whitney's railroad proposal described in my previous chapter that transform modern infrastructures into symbols of national advancement. Next, I turn to the construction of the Xinning Railway to consider the ways in which these discourses of railway development and nationalism were taken up by Chinese overseas migrants in their attempt to build China's national railway system.

The Struggle Over China's First Railroad (1863-1877)

From the late 19th and through the early 20th century, China hosted not one or two, but more than half a dozen imperial powers locked in fierce competition over railroad concessions.¹³⁹ Seeking greater access to China's abundant resources and its vast markets, overseas firms had long been eager to expand their commercial activities into infrastructural development, with a particular emphasis on railway construction. For much of the 19th century however, these efforts had been largely quelled by Qing officials who felt that they had a legal right to reject foreign petitions. After all, there was not a single mention of railways in any of the treaties that had been signed between Qing China and Western powers following the two Opium Wars. But the British were unrelenting, pointing to Article XII of the Treaty of Tianjin (天津條約), which stipulated that "[Subjects of the Treaty Powers], whether at the Treaty Ports or at other places, desiring to build or open houses, warehouses, churches, hospitals, or burial grounds, shall make their agreement for the land or buildings they require, at the rates prevailing

¹³⁹ Tamara Chin explains how European and American corporations, along with the German state, had sponsored railway maps drawn by German geologist Ferdinand von Richthofen. See: Tamara Chin, "The Invention of the Silk Road, 1877," *Critical Inquiry* 40, (2013):194-219.

among the people, equitably and without exaction on either side.”¹⁴⁰ Citing the ambiguities in the phrase “or at other places,” and the lack of an explicit prohibition on railway construction, Article XII became a central site of dispute between Qing and British officials.

In 1863, coincidentally, the same year the Central and Union Pacific Railway Companies broke ground on the Transcontinental Railway, the British consul in Shanghai, on behalf of twenty-seven foreign firms, submitted the first railroad concession petition. The petition calling for the right to build a railway line between Suzhou, a famed silk producing town, and Shanghai, a major trading port in the lower Yangzi River region was delivered to Li Hongzhang (李鴻章), a Qing official and close advisor to Empress Dowager Cixi. However, Li rejected the foreigners’ demands, refusing to even take the petition to the Empress. The Qing’s refusal of these petitions, the missionary W.A.P. Martin wrote, “show the animus of the Chinese in regard to all the appliances of Western civilization. To their eyes it is synonymous with steamer, telegraph, and railway.”¹⁴¹

One year later, in 1864, the British tried again. This time, McDonald Stephenson, a retired partner at Jardine Matheson and a civil engineer responsible for the East Indian Railway, submitted his plan to the Zongli Yamen recommending that railway lines be constructed to link Hong Kong and Shanghai with Calcutta. “Sir M. Stephenson’s scheme was, however,” according to the missionary Ernst Eitel writing from Hong Kong, “entirely premature and met with no encouragement on the part of the Chinese government.”¹⁴² In the following year, Jardine Matheson took a more explicit approach by constructing a 600-meter-long railway track just

¹⁴⁰ Imperial Chinese Maritime Customs, *Treaties, Conventions, etc. between China and Foreign States*, (Shanghai: Statistical Department of the Inspectorate General of Customs, 1908), 216.

¹⁴¹ W.A.P. Martin, *A Cycle of Cathay or China, South and North* (New York, F.H. Revell Co., 1897), 233.

¹⁴² Hsien-chun Wang, “Merchants, Mandarins, and the Railway: Institutional Failure and The Wusong Railway, 1874-1877,” *International Journal of Asian Studies* 12, no. 1 (2015): 31-53.

beyond the gates of the capital in Beijing with the intension of demonstrating the magnificence of railway technology. Again, the Qing was disinterested and promptly had the line dismantled. The next attempt did not take place until 1875, when Jardine Matheson bypassed authorities and constructed the Shanghai-Wusong Railway, a 14-km-long track in Shanghai without the Qing government's approval.

Although the Shanghai-Wusong line was built in the 1870s, initial efforts began in 1865, when Jardine Matheson and a cohort of foreign merchants formed the Woosung (Wusong) Road Company, hoping to construct a railway line connecting Shanghai and Wusong, a fishing village situated at the mouth of the Huangpu River. Due to a lack of funds however, the project was suspended temporarily before being revived in 1872.¹⁴³ This time, the company's major shareholders included several important American diplomatic and merchant figures in Shanghai: Oliver B. Bradford, the American vice-consul at Shanghai; Augustus Hayes, of Olyphant & Co.; Frank Forbes, of Russell & Co, the latter two of which were heavily involved in the Old China Trade. In the winter of 1872, the American and British Consuls Oliver Bradford and Chaloner Alabaster submitted a joint dispatch to the Shanghai Daotai, requesting permission to lease land in the American Concession for the construction of a "carriage road" (*malu* 馬路) between Shanghai and Wusong, with the intension of later developing it into a railroad. The Chinese authorities granted the consuls permission to purchase the lands, and in January 1876, the Shanghai-Wusong line began construction, and was open to the public by the July of that year.

In praise of the railroad's completion, the *North China Herald* celebrated the event with an air of unbridled optimism characteristic of other accounts glorifying railway development projects throughout the 19th century: "Steam has conquered, and will go on conquering, even in

¹⁴³ Percy H. Kent, *Railway Enterprise in China: An Account of Its Origin and Development* (London: Edward Arnold, 1907), 9-10.

China,” the American publication remarked.¹⁴⁴ “The forerunner of the greatest political and social revolution that has marked either the past or modern history of China,” the completion of China’s first railroad was “an event that will do more, if properly followed up, to bring the people of this great Empire within the fellowship of nations, than almost anything else that could be devised.”¹⁴⁵ By invoking the national fellowship, the *North China Herald* draws not only upon the discourse of unity reminiscent of reports of the Transcontinental Railway’s completion, but also figures the Shanghai-Wusong Railway as a portent of national progress. The newspaper’s use of the future tense here to describe the railway as a technological feat that “will do more” for China’s entrance into the family of nations, and their contention that steam “will go on conquering” China, is not an objective assessment of the railroad’s function, but rather, betrays the speaker’s own convictions of the place of railways in China’s future. The historical importance of the railroad is calculated through the logic of speculation, and in this way inseparable from a set of ideational constructs circumscribed by American interests which they have projected onto the railway line.

Scholars have conflicting accounts of whether or not the ruse to purchase lands under the auspices of building a “carriage road” was aimed at deceiving the Daotai, with some suggesting that the Daotai probably knew the company’s true intentions.¹⁴⁶ Whiles others have read this

¹⁴⁴ Ibid.

¹⁴⁵ “Opening of the Woosung Railway to Kungwang” *The North China Herald*, July 1st, 1876, (<https://primarysources.brillonline.com/browse/north-china-herald-online/volume-1876-issue-477-18760701;nch18760340477>) (Accessed, May 25th, 2022).

¹⁴⁶ Hsien-chun Wang for example, suggests that the Daotai probably knew the ultimate aim of the project in “Merchants, Mandarins, and the Railway,” 35-36. Through a reading of letters exchanged between Qing officials and American diplomats, Blair C. Currie also suggests that Bradford had discussed the railway with Feng Junguang, a director at the Jiangnan Arsenal, who then brought the matter up with his superior, Li Hongzhang, who configured that the Feng had reported the matter to him in Blair C. Currie, “The Woosung Railroad (1872-1977), *Papers on China Vol. 20*, East Asian Harvard Research Center, (Cambridge: Harvard University Press, 1966): 56-57.

rhetorical sleight of hand as a deliberate scheme aimed at undermining Qing sovereignty.¹⁴⁷

Nevertheless, that the two consuls had submitted their petition under the auspices of building an ordinary carriage road was a major point of contention the Qing repeatedly brought forth to the foreigners. When the Qing wrote to the American and British governments requesting that they terminate operations a month into the railroad's construction, the Shanghai Daotai, Feng Junguang (馮俊光) wrote "at the time [the] application was made to purchase land, it was for an ordinary ma-loo,"¹⁴⁸ and that "the alternation of the road into a Railway is at variance with the terms of the former communication."¹⁴⁹ Such a breach over the terms of agreement led to the eventual demise of the railway line, when, after running for a little over a year, it was purchased and dismantled by Qing viceroy Shen Baozhen (沈葆楨).

Reflecting upon the railway's ill-fated short life, Augustus Hayes, an American investor of the Shanghai-Wusong Railway, wrote an essay titled "The First Railroad in China" (1878) for *Harper's Magazine*. He begins, "I remember seeing, many years ago, a remarkable book, published in Vermont, the title of which might have served well as a heading for this paper, recording faithfully, as it proposes to do, the details and ignominious ending of an earnest effort to advance Western civilization in the Far East. The title was, *Apokatastasis; or, Progress Backward*."¹⁵⁰ On the account that Hayes writes having seen a book, rather than having read it, I speculate that Hayes was attracted to the title of the work and not its content. An obscure and

¹⁴⁷ See: Jonathan E. Hillman, *The Emperor's New Road: China and the Project of the Century* (New Haven, Yale University Press, 2020), 27-28; David Pong, "Confucian Patriotism and the Woosung Railway," *Modern Asian Studies* 7, no. 4 (1973): 648.

¹⁴⁸ "Despatch from Feng Taotai to Mr. Consul Medhurst" translated at the British Consulate. Cited in Peter Crush, *Woosung Road: The Story of China's First Railway* (Hong Kong: The Railway Tavern, 1999), 29-30.

¹⁴⁹ *Papers Relating to the Foreign Relations of the United States, Transmitted to Congress, With the Annual Message of the President, December 4, 1876*, China, eds. Daniel J. Lawler and Erin R. Mahan (Washington: Government Printing Office, 2010), Document 39. <https://history.state.gov/historicaldocuments/frus1876/d39> (Accessed May 22nd, 2022)

¹⁵⁰ Augustus A. Hayes, "The First Railroad in China," *Harper's Magazine* Vol. 58, December 1878, 131.

curious work by Leonard Marsh (1800-1870), *Apocatastasis; or, Progress Backward* is a consideration of the circular understanding of time, with little relevance to Hayes' essay.¹⁵¹ My reading of "The First Railroad in China," shows how Hayes perceived the dismantling of the Shanghai-Wusong line as an indication of China's regression, or in other words, their "progress backward," by making the railroad a symbol of national character and civilisational advancement.

Although he states in the essay's introduction that his intention is to provide a faithful recording of the pitiful demise of China's first railway, in reality, Hayes devotes very little space to explaining the railway's dismantling. Instead, a great portion of the text is dedicated to his peers at the Woosung Road Company, of whom he paints an admirable portrait. "The foreign merchants in China are a hard-working and enterprising set of men, who have always been considered good fellows," Hayes writes.¹⁵² These men have sincere aspirations, "to introduce railroads into a country so singularly fitted to benefit by them."¹⁵³ Later in his essay, Hayes describes how the Woosung Road Company's board of directors busied themselves in London, speaking to "capitalists in their dens, and bankers in their halls," in search of funding.¹⁵⁴ He accredits one board member in particular, with pushing the affair on to success. Though mysteriously, the man remains anonymous. Without a name to ascribe these deeds to, the figure Hayes describes is comprised of only by his entrepreneurial and persistent spirit. "Never was a man better fitted for a task than he for this," Hayes commends, "I know of no one else who could have accomplished what he did; and while much credit is due to all who, from first to last, put their shoulders to the wheel, it is clearly by his intelligence, energy, and persistence that the

¹⁵¹ Leonard Marsh, *Apocatastasis; or, Progress Backward* (Vermont: Chauncey Goodrich, 1854).

¹⁵² Hayes, "The First Railroad in China," 131.

¹⁵³ Ibid.

¹⁵⁴ Ibid., 133.

building of the road was secured.”¹⁵⁵ Even if he were permitted to publicise the man’s name, it “would be familiar to but few readers of this Magazine.”¹⁵⁶ Thus, Hayes is content with offering the anonymous individual’s achievements—securing the building of the railroad—as a proxy for the individual. Railroad promotion and industrial spirit in this context, serve not only as a template for character development, but indeed, functions as a substitute for character itself.

On the subject of whether or not Bradford and Alabaster’s petition was submitted as a means of subterfuge, Hayes reassures readers that “they acted throughout in what they deemed a strictly legal manner,” and that their written records of the matter are “words of truth and soberness.”¹⁵⁷ Casting blame onto Qing authorities, Hayes claims that “no well-informed or intelligent man doubted for one moment that the Chinese authorities knew exactly what the builders were doing, and were quite content so long as they were not called upon to commit themselves.”¹⁵⁸ In contrast to the honest and honourable men who have selflessly given their time, energy, and money to furthering China’s civilisational advancement, the Chinese officials “only wanted to keep their skirts clear of all responsibility,” whilst “fulminating the most indignant or heart-broken communication to his superiors about the inexpressible fierceness and wily tricks of the infamous barbarians.”¹⁵⁹ In his attempt to vindicate British and American character from having acted dishonestly in their petition to the Shanghai Daotai, Hayes simultaneously produces the opposite image – that of Chinese character. Exonerating Anglo-American character in this context entails producing its foil, that of an untrustworthy and irresponsible Chinese. The two are mutually informed and co-producing.

¹⁵⁵ Ibid., 134.

¹⁵⁶ Ibid.

¹⁵⁷ Ibid., 132.

¹⁵⁸ Ibid.

¹⁵⁹ Ibid.

Towards the end of his essay, Hayes describes how the Chinese dismantled the Shanghai-Wusong Railway. “There is a report that the plant is to be taken to the island of Formosa,” but it “might as well be Timbuctoo” he says.¹⁶⁰ Hayes attributes the railway’s demolishing to a Chinese character trait, a particular penchant Chinese people have for atrophy and ruin. “I can imagine the keen delight of the official charged with the work of demolition. A friend of mine always maintained that a Canton boy on the Pacific Mail steamer cheerfully accepted a largely reduced stipend in consideration of the privilege of tormenting the passengers three times daily with an old-fashioned and deafening gong.”¹⁶¹

Incrementally, from the spurious story of the boy tormenting passengers to the destruction of the Shanghai-Wusong railway, Hayes then escalates to the Opium War. “Something similar—*parvis componere magna*—must have been the feelings of the Chinamen who for the first time in this century had the pleasure of destroying the work of foreigners without a certainty of a Nemesis in the shape of the ubiquitous and inevitable gun-boat,” an oblique reference to Imperial Commissioner Lin Zexu’s (林則徐) order to destroy chests of illegal British opium in Guangzhou, which sparked the First Opium War in 1839.¹⁶² In Hayes’ view, although the three anecdotes are by no means commensurate, they are nevertheless correspondent. Each speak to a fundamental Chinese characteristic – the “pleasure,” “keen delight,” and “cheerfulness,” they feel towards destruction, which ultimately inhibits the benevolent attempts on the part of Shanghai merchants to help China enter into the fellowship of nations and advance as a civilisation through railroad development. As I have illustrated in my previous chapter, if China served as a productive setting for constructing American character in

¹⁶⁰ Ibid., 135.

¹⁶¹ Ibid.

¹⁶² Ibid.

early national biographies, it is evident that venerating American character in the late 19th century continues to draw on the figure of China and Chinese character. Moreover, by reducing the complex figures involved in the construction of the Shanghai-Wusong Railway into mythological archetypes of good (Consuls Bradford and Alabaster) and evil (Daotai Feng), the story Hayes tells also presents these perplexing encounters through a dramatically paced story which functions through the conventional narrative structures of our fictions. In being defined by a distinct pattern of behaviours, the anonymous railroad promoter also functions as an archetype.

In the end, the emphasis Hayes places on belabouring the fine character of his peers does indeed serve as a recording of “the details and ignominious ending of an earnest effort to advance Western civilization in the Far East.” Although, not by retelling the dismantling of the railroad itself, but by attributing the railroad’s construction and demise to national character. From the beginning, Hayes credits the Shanghai-Wusong Railway to one nameless man, who’s intelligence, energy and persistence secured the railroad’s construction. Hayes also assures readers that in the contest over the railroad’s legality, Consuls Bradford and Alabaster acted honestly, truthfully, and soberly. It is unsurprising then that Hayes also attributes the railroad’s demolition to Chinese character, with their tendency to delight in destruction. That Hayes proposed *Apocatastasis; or, Progress Backward* as a title that would have “served well for the heading for this paper” shows how Hayes’ recounting of China’s first railway is at the same time a diagnosis of China’s failure to advance, rooted in Chinese character. In the pages that follow, I trace the dismantling of the Shanghai-Wusong Railway across Qing borders to show how Hayes’ diagnosis of Chinese character and his reading of the railway’s destruction is confined to a national-framework that fails to account for the Qing’s own imperial policies in Taiwan.

After the Shanghai-Wusong line was dismantled in 1877, Shen Baozhen ordered that its remnants be taken to the island of Taiwan. Having served as the leader of China's first full-scale naval academy, the Fuzhou Arsenal (Foochow) for almost a decade, Shen had access to the necessary maritime resources to transport the various railway parts across the Taiwan Strait. Funded in part by duties collected from the import of opium, and in collaboration with engineers from the French Imperial Navy, the academy helped develop the Qing's naval warfare technologies. Despite the stigma attached to Western technologies, made even less appealing by the presence of a large contingent of French engineers and technicians, and his own role in suppressing the Taiping Rebellion, Shen was nevertheless a staunch advocate of China's development of Western technologies and its role in strengthening China.

In his letter to the Zongli Yamen expressing concern that the British railway had been built without official sanction and that financially, a foreign railway might only serve foreign concerns and damage the China Merchants' Steam Navigation Company's operations, Shen explained that:

I am most willing to manage the railway. However, Wusong is not the right place, because it would be very hard to prevent smuggling if foreigners load and unload cargo there. Besides, there would be no funds to support the railway if we strictly follow the customs regulations. Therefore, [I want to] change the useless into the useful, and use it as a basis for Taiwan's defense. In the future, [the railway] must benefit China's north-western territory."¹⁶³

According to the viceroy, the first issue with the Shanghai-Wusong Railway was its placement, not its technology. The second issue was that he considered the railway a foreign contrivance ripe for smuggling. The British had designed the railway in accordance with their commercial interests, and there was little to be gained by taking it over. Therefore, to "change the useless into

¹⁶³ Shen Baozhen to Guo Songtao, August 1877, in *Shen Wensu gongdu*, Vol. 2, 324. Quoted in Wang, "Merchants, Mandarins, and the Railway," 47.

the useful,” Shen proposed that the British rails and rolling stock be transported to Taiwan, where it could serve as the basis for the Qing’s military defense in Taiwan against foreign encroachment. Yet in the broader context of the Qing’s 19th century imperial policy however, transplanting the Wusong line not only served as a defense strategy but was also a means of colonising Taiwan by facilitating Han settlement and Aboriginal assimilation through modern infrastructural development.

Indeed, Shen’s railway scheme shadowed his calls for the annexation of Taiwan in the 1870s, where in addition to pressing the imperial government to build telegraph infrastructure, Shen was also a strong proponent of the opening of mines and most significantly, railway construction.¹⁶⁴ In 1875, two years prior to the dismantling of the Wusong line, Shen launched the “open the mountains, pacify the savages” policy (*kaishan fufan* 開山撫番). The aim of this policy was twofold: to establish road and telegraph lines and to fortify Qing claims to sovereignty over the entire island.¹⁶⁵ Under this policy, the Qing government led a colonial campaign against the Aborigines by mobilizing troops to establish imperial presence in the central mountain range region, which was accompanied by the relaxing of emigration laws encouraging settlers from the mainland to settle in Taiwan.¹⁶⁶ The Qing’s colonisation of Indigenous territories gave way to agrarian settler communities mostly recruited from southern China, particularly from Guangdong and Fujian Provinces.¹⁶⁷ Jonathan Chappell suggests in his analysis of Qing colonial policy that Shen employed “calculations of political economy which

¹⁶⁴ Niki Alsford, *Transitions to Modernity in Taiwan: The Spirit of 1895 and the Cession of Formosa to Japan* (New York: Routledge, 2018), 49-50.

¹⁶⁵ Shen proposed that the development of frontier industries like camphor and lumber would help pay for these projects.

¹⁶⁶ Katsuya Hirano, Lorenzo Veracini & Toulouse-Antonin Roy, “Vanishing Natives and Taiwan’s Settler-Colonial Unconsciousness,” *Critical Asian Studies* 50, no. 2 (2018): 199.

¹⁶⁷ *Ibid.*

proposed opening land up to agricultural production, or *developing* it, as the best means to fund its defense through taxation of its produce.”¹⁶⁸

More than opening land up to agricultural production, modern technologies and infrastructures were critical to the developmentalist logic undergirding Shen’s colonial policies in Taiwan. “Once the thorns have been cut on a daily basis,” Shen argued to the Qing court, “settlements and production will rise and we will gradually be able to civilize the savages, and then we might be able to add their land to our common supply.”¹⁶⁹ By making industrial modernization the precondition for annexation, Shen figures railroad development as one stage in the broader Qing imperial project. Shen once again reinforces the importance of development in his supplications to the court, suggesting that “many tools are sufficient to make full use of Taiwan’s land. What is today our so-called defensive barrier can on some other day become a metropolis; the roots of this are already deep.”¹⁷⁰

These expansionist policies show how Qing officials were in fact an essential component of the network of forces that helped construct China’s railroads. By situating the Wusong line in the context of 19th century Qing territorial expansion and the development of its own colonial policies, Shen’s dismantling of the foreign railway is better understood as an attempt to further Qing imperial interests than a disdain towards the technology or solely as a matter of competing sovereignties. Shen’s supplications to the imperial court show how infrastructural modernisation was a vehicle through which the Qing could expedite settler-colonial processes. In this way, I argue that an analysis that attributes China’s railroad development solely to foreign machinations

¹⁶⁸ Jonathan Chappell, “Developmentalism in Late Qing China, 1874-1911,” *The Historical Journal* 64, no. 1 (2021): 98-120.

¹⁶⁹ Shen Baozhen, “Overall Plans for Managing Taiwan and the Difficulties of Discontinuing Opening Roads and Pacifying Aborigines.” Cited in Chappell, “Developmentalism in Late Qing China, 1874-1911,” 106.

¹⁷⁰ *Ibid.*

relies on a binary framework that pits East against West, Qing officials against European firms. As significant as these relations are, equally important are the Qing's imperial relations with its colonies and proximate territories that helps guide our interpretation of the Qing's destruction of the Shanghai-Wusong line. Furthermore, Shen's collaboration with the French at the Fuzhou Arsenal, his dismantling of the British railway in Shanghai, and his colonial policies in Taiwan reveal various overlapping scales of interaction. Uncovering varying levels of relations is instructive to our study of semicolonialism in China so that we might specify, as Osterhammel demands, "*where, when, how and to what effect did which extraneous forces impinge*" on Chinese life.¹⁷¹

Rather than a binate encounter between China and the West, charting the development and flow of infrastructures between Europe, China, and Taiwan, shows how the struggle for early Chinese railway development was entangled within a global system of competing imperial powers. These imperial entanglements risk effacement when we confine the construction and dismantling of the Shanghai-Wusong line within national boundaries—as Augustus Hayes does in his essay—by framing the conflict over the railway solely as a struggle between Chinese and westerners, rather than a constellation of asymmetrical relations between Qing authorities, the shareholders at the Woosung Railway Company, and Aboriginal peoples in Taiwan. In the next section, I examine the envisioning and construction of the Xinning Railway line to add Chinese overseas migrants into this web of powers shaping the trajectory of early railway development in China. My analysis of the Xinning Railway shows how the Transcontinental Railroad deeply informed Chinese migrants' vision of railways as an instrument of development, commerce, nationalism, and imperialism.

¹⁷¹ Osterhammel, "Semicolonialism and Informal Empire in Twentieth-Century China," 295.

“No Foreign Shares, No Foreign Debts, No Foreign Workers:” The Making of Chen Yixi’s National Railway Line

For over a century, the majority of Chinese migrants to the United States were native to the Pearl River Delta region in southern China. The “four counties” (*siyi* 四邑) in rural Guangdong, among its least prosperous regions, supplied over ninety percent of the Chinese labour force to California. Home to one of China’s oldest and most developed market-oriented economies, the delta region was also where China’s sole official trade port was located, acting as the oldest site of contact between China and the West. This economy bred a relatively high degree of prosperity and served as a major site of global trade. Yong Chen speculates that the delta region’s socioeconomic realities help explain why the discovery of gold so quickly triggered the first wave of emigration to California beginning in the 1850s,¹⁷² when between 1851-1855, nearly 50,000 Chinese traveled to California in search of gold.¹⁷³

When the gold rush began to die down, Chinese migrants sought employment elsewhere, most notably, through the Central Pacific Railroad Company. Working in concert with the Pacific Mail Steamship Company, who actively recruited Chinese migrants from southern China and Hong Kong, the CPRC employed 15,000-20,000 Chinese workers over the course the Transcontinental Railroad’s construction.¹⁷⁴ Among these workers was Chen Yixi (陳宜禧), who left his native Taishan and began life in the United States one year prior to the Transcontinental’s construction. Chen spent his early years as a seasonal laborer, working in mining, railway construction, and as a domestic helper. Over the course of several decades, Chen soon became a

¹⁷² Yong Chen, *Chinese San Francisco: 1850-1943* (Stanford: Stanford University Press, 2000), 12.

¹⁷³ Adam McKeown, “Global Migration and Regionalization, 1840-1940,” (Paper presented at the Mapping Global Inequalities Conference, Santa Cruz, California, December 2007), 3.

¹⁷⁴ Gordon Chang, Shelley Fisher Fishkin, Hilton Obenzinger, “Introduction,” *The Chinese and the Iron Road* (Stanford: Stanford University Press, 2019), 2.

successful broker of Chinese migrant labour, a merchant, and an important political figure in the overseas Chinese community.¹⁷⁵ With the rise of exclusionary laws barring Chinese immigration impeding his labour recruitment business, Chen made several trips to China in the early 20th century and began chartering his new project, the Xinning Railway Company, the first railroad in China designed by a Chinese migrant in America. By canvassing an array of Chen's letters and proposals seeking funding for the Xinning Railway, I illustrate how Chen's project drew inspiration from the Transcontinental Railroad and inherited its attendant conceptions of railroad development as a means of securing global commercial networks for national strength.

During his time in the United States, a coterie of prominent politicians and businessmen recognised Chen for his entrepreneurial spirit and business acumen. Henry Yesler (1810-1892), who would later become mayor, personally invited Chen to Seattle, hoping to that Chen could help develop the growing city. When Chen moved to Seattle, he founded the Guangde Company (Quong Tuck), which provided the Pacific Mail Steamship Company the bulk of its Chinese passengers and crew members. He also developed a close friendship with James J. Hill (1838-1916), the chief executive for the Great Northern Railway, a branch of the transcontinental railways. Attracted to its proximity to Asia and control over any future trade that might develop, Hill stationed the Great Northern's western terminus in Seattle thereby transforming the city into a major nodal point between North America and East Asia. Under Hill's direction, between 1896 and 1916, Seattle's commerce flourished and expanded by eight-fold as the city became a central station in a broader trans-Pacific commercial network that connected the United States with

¹⁷⁵ For a biography of Chen Yixi, see: Beth Lew-Williams, "The Remarkable Life of a Sometime Railroad Worker: Chin Gee Hee, 1844-1929" in *Chinese and the Iron Road*; Lucie Cheng, Liu Yuzun & Zheng Dehua, "Chinese Emigration, the Sunning Railway and the Development of Toisan," *Amerasia Journal* 9 no. 1 (1982): 59-74; Madeline Y. Hsu, *Dreaming of Gold, Dreaming of Home*, 156-175; Kornel Chang, *Pacific Connections: The Making of U.S.-Canadian Borderlands*. Berkeley: University of California Press, 2012; Tao Shixiu, "Founder and Chief Engineer of Xinning Railway – Chen Yixi," *Yunan Archives* 2, 2019. 45-46.

Japan, Shanghai, and Hong Kong.¹⁷⁶ Hill offered Chen a share in the massive fortunes to be had by developing Seattle and tasked Chen's firm with arranging the requisite labour for railway construction in the Washington State area. When James J. Hill prospered, so did Chen Yixi. "Commodifying the transpacific spaces that he had once traveled and traversed," Kornel Chang writes that Chen "helped develop an international market in labour that connected rural villagers in southern China to the railways, mines, fisheries, and mills in Washington, Oregon, Montana, and Alaska."¹⁷⁷

From his friendship with Hill, Chen witnessed first-hand how railroad construction was a necessary means of bringing untapped markets into the circuits of international trade. The Great Northern line had been a tremendous thing for Seattle, and he hoped the same benefits could be brought to Taishan. He began delivering lectures on the subject to customers who entered his store in Seattle.¹⁷⁸ In his diaries, Chen remembers how his friends in Seattle encouraged him in his mission: "Judge Thomas Burke and J.J. Hill of the Great Northern Railroad arranged for me to be given a trip over some of the principal railway lines of the countries," and served as "my opportunity to add to my knowledge of railroad construction."¹⁷⁹ In addition to having worked on the Transcontinental Railroad, supplying labourers for the Great Northern, Chen also benefited from the support of railway magnates who had experience transforming economic backwaters into salubrious commercial centers. "Could I ever be what I am if it wasn't for Seattle men?" he wonders.¹⁸⁰ By ascribing his personhood to James J. Hill's influence, Chen's diary exposes how the Transcontinental Railroad fundamentally transformed the lives of Chinese

¹⁷⁶ Madeline Y. Hsu, *Dreaming of Gold, Dreaming of Home* (Stanford: Stanford University Press, 2000), 161.

¹⁷⁷ Kornel Chang, *Pacific Connections: The Making of U.S.-Canadian Borderlands* (Berkeley: University of California Press, 2012), 17.

¹⁷⁸ Hsu, *Dreaming of Gold, Dreaming of Home*, 163.

¹⁷⁹ Chen Yixi, "Chin Gee-Hee," University of Washington Special Collections, Willard G. Jue Papers, 6. Quoted in Chang, *Pacific Connections*, 42.

¹⁸⁰ *Ibid.*

migrants and the ways in which they conceived of the relationship between railway construction and economic development. In 1904, after passing his Seattle business onto his son, Chen returned to China where he began to draft the Xinning Railway project.

However, building a railway in China not only entailed bringing his railway and commercial expertise to Taishan. It also required adapting to developments in China's unrelenting struggle for railroad autonomy. Before he left for China, it was announced that several provincial gentry members from Guangdong, Hunan, and Hubei had initiated the first petition against foreign investments over Chinese railways. With the help of Chinese merchants and students in America, the gentry members led an abrogation campaign against the United States financing of the Guangzhou-Hankou (Canton-Hankow) Railway.¹⁸¹ To garner support, the leaders of the campaign went abroad, calling on overseas Chinese to invest in railways stocks and share in the fight against American financiers. Many migrants subscribed. When news reached the United States, Chen recognised the power of overseas Chinese national sentiment and capital, later using this as a model for his own railway enterprise.

Upon his return to China, Chen Yixi wrote a letter to the Governor of Guangdong, Zhang Mingqi (張鳴岐) explaining his cause. He emphasised the injustice of foreign dominion over railway benefits. "We have worked tirelessly in foreign countries to build railroads for foreigners, and they have benefited greatly from our labour" he wrote disapprovingly, "today we are inviting foreigners to build railroads in our country, and they will benefit greatly again, this is a great injustice."¹⁸² He continues:

¹⁸¹ En-Han Lee, *China's Quest for Railway Autonomy, 1904-1911* (Singapore: Singapore University Press, 1977), 62-78.

¹⁸² 「我们辛辛苦苦在外国替洋人筑路, 洋人大受其益; 今天我们请洋人在我国筑路, 又是洋人大受其益。今天我们请洋人在中国筑路, 又是洋人大受其益, 这实在太不公平。」Zhang Xiaohui 张晓辉, *Jindai Yueshang yu shehui jingji* 近代粤商与社会经济 [Modern Guangdong Merchants and Socio-Economic Development] (Guangdong: Guangdong renmin chubanshe 广东人民出版社, 2015).

Having lived in America for over forty years as a merchant, I have always thought that the railways in Europe and the United States to be so extensive. Their tracks are like spider webs, and carriages like magpies fanning their tails. As a result of their railways, their commerce flourish and their nations grow stronger. I have been deeply impressed by this, whilst carrying the thought of my motherland in my heart. The railroad will bring prosperity to all. It is the most expedient means of transport, exchange, and communication and it is for this reason that I am proposing to raise money to build a railroad.¹⁸³

Besides his overwhelming patriotic sentiment and the conviction that national fortitude is contingent on commercial strength and infrastructural development, Chen also employs metaphor to naturalise western technologies. Situating these industrial technologies as part of the natural world, he likens the iron tracks to spider webs and the carriages to magpies. By harnessing the language of nature for the purposes of bringing “prosperity to all,” Chen presents railway development as a natural process in a nation’s teleological development. According to this Enlightenment logic, railway construction as a means of transforming, developing, and optimising land is the natural path for commercial and industrial development – the magic formula for China’s national redemption.

In many ways, China’s struggle for railway autonomy served as a sort of rhetorical buoy for Chen’s railway enterprise. Wielding the language of national autonomy in the Xinning Railway Company’s charter, he clearly states that “no foreign shares, no foreign debts, and no foreign workers will be employed,” although the charter does not disclose what the boundaries of “foreign” might constitute.¹⁸⁴ Further reinforcing the importance of self-reliance, the charter also stipulated that “in the future, railway routes will be funded only with the money within the shares already collected, not through foreign loans.”¹⁸⁵ To raise the necessary capital, rather than

¹⁸³ 「职商旅居美洲四十余年, 窃思欧美列邦铁路纵横, 轨若布网之蛛, 车如卸尾之鹄。故其商业日盛, 国势日强。职商有感于斯, 眷怀祖国, 深知铁路之权利至溥, 转输交通最便, 是以创议集资办路。」 Ibid.

¹⁸⁴ 「不收洋股、不借洋债、不雇洋工」 Ibid.

¹⁸⁵ 「将来再续请接路线, 总在所集股银内支用, 不得抵借洋债」 Ibid.

turning to his powerful friends in Seattle, federal banks, or the Qing government, Chen and along his partner Yu Zhou (余灼) embarked on a lecture tour around the United States and Hong Kong under the banner “Expand Communications, Build Railroads,” galvanising support from overseas Chinese, with over fifty merchants giving their support.¹⁸⁶

In response to the stereotype of Chinese character, which, as Hayes’ essay outlines, suggests that Chinese people would rather destruct then construct, Chen writes this in his journal: “foreigners say we are stupid and that we do not know how to build railways, but I am not convinced. Were the railways in the western frontier of the United States not built by our Chinese labourers? Let me go back and build a railway for them to see for themselves.”¹⁸⁷ Chen believed that building a Chinese railroad would prove to foreigners that they were not disposed to destruction. In this context, railroad construction is framed as a means of redeeming Chinese character. That Chinese labourers built America’s railways is proof of this. By using infrastructural development as a narrative vehicle onto which Chinese character is constructed, Chen transforms physical infrastructure into a metaphor for national character. The importance of his railway project lies not only in bringing commercial prosperity to Taishan, but in redeeming Chinese character in the eyes of foreigners, who will “see for themselves” how capable they are.

Indeed, industrial nationalism proved to be an alluring force because Chen Yixi and Yu Zhuo gathered close to three million yuan in funds, more than four times the original goal. Many felt that the principle of self-reliance would not only cut costs but also serve as an unprecedented

¹⁸⁶ The campaign slogan in Chinese was 「开闢交通创造铁路」, He Shubin 何書彬, *Dongfang xiyatu zhimeng* 東方西雅圖之夢 [Dreams of the East in Seattle], *Da lishi* 大歷史 8 (2012): 33.

¹⁸⁷ 「洋人说我们愚笨, 不懂筑铁路, 我就不服气, 美国西部的铁路, 那条不是我们华工筑的? 待我回去筑条铁路给他们看看。」 Tao Shixiu 陶詩秀, “Xinning tielu chuangbanren he zonggong chengshi” 新寧鐵路創辦人和總工程師-陳宜禧 [Founder and Chief Engineer of Xinning Railway – Chen Yixi] *Yunan Archives* 2, (2019): 45-46.

national achievement: “to build a railroad in China with Chinese capital is already a difficult task, and to build it with the Chinese people’s knowledge is unique in Chinese history.”¹⁸⁸

Although the railway was to be built in Taishan, Chen did not put restrictions on the origins of potential investors from many other parts of China.¹⁸⁹ Two thirds of the money came from overseas Chinese migrants in the United States, and the rest from merchants in Hong Kong, Singapore, and Taishan.¹⁹⁰ The latter often investing remittances from their relatives abroad.

Built in China, with Chinese capital, by dint of Chinese labour, and with Chinese knowledge, Chen’s railway campaign capitalised on patriotic sentiment by deriving financial investments through an appeal to nationalism. Chen’s insistence on “no foreign capital” was by no means meant to prevent Chinese migrants who lived and made their money abroad from aiding in his cause. In fact, he embraced overseas migrant contributions and sought assistance from investors from various other parts of China. Although “foreign capital” did not preclude capital acquired in overseas places, it was nevertheless a boundary that Chen reinforced repeatedly throughout his campaign. In this instance, “foreign” signified national difference rather than spatial distance. He evidently did not consider overseas migrants as “foreign” because even if they lived halfway across the world, he accepted their investments with the understanding that this money adhered to the principles of self-reliance he campaigned on. In the process of enfolded overseas workers into his conception of the nation however, Chen produces an abstract and deterritorialised conception of national identity to which Chinese people are rigidly affixed. By severing national identity from geographic territory, Chen naturalises national identity by

¹⁸⁸ *Chung Sai Yat Po* 中西日報 [East West Daily News], 30 November 1904.
<https://oac.cdlib.org/ark:/13030/hb2489p06v/?brand=oac4> (Accessed March 25th, 2022).

¹⁸⁹ Hsu, *Dreaming of Gold, Dreaming of Home*, 166.

¹⁹⁰ Lucie Cheng, Liu Yuzun & Zheng Dehua, “Chinese Emigration, the Sunning Railway and the Development of Toisan,” *Amerasia Journal* 9, no. 1 (1982): 65.

transforming it into an inalienable trait. Under this framework, migration and physical distance neither undermines nor erodes national identity. A close reading of his conception of “foreign” in his railroad campaign reveals the ways in which Chinese migrants helped create an abstract national identity through which they negotiated conceptions of spatial belonging in the early 20th century.

Backed by a chorus of fervent, nationalistic supporters, Chen worked tirelessly, climbing mountains and wading waters, personally conducting land surveys to map a selected route for his railway.¹⁹¹ He set up his plan in stages. The first stage was the construction of a line connecting Taishan to the nearby town of Jiangmen, where one could catch a boat to Hong Kong. Chen himself likely boarded these boats as he travelled between Taishan, Hong Kong, and the United States, showing how trans-Pacific labour, capital, and infrastructural networks shaped China’s railway development. He eventually hoped that his railway would connect Taishan with Guangzhou, the rest of China, Hong Kong, Vietnam, southeast Asia, Europe, and finally the rest of the world, thus transforming rural Taishan into a global commercial center that would replace the British colony, Hong Kong.¹⁹² Thus, even as he sought to develop a national railroad system, Chen’s hopes for the Xinning Railway was nevertheless animated by the same global commercial aspirations driving the Transcontinental Railroad’s construction. Indeed, the global scope of these aspirations reflect how China’s national railway development was also imbued with fantasies of imperial expansion.

Unfortunately, Chen soon found that acquiring initial financial support was the least of his concerns. First, he needed to pay the Qing viceroy of Guangdong and Guangxi, Cen

¹⁹¹ Hsu, *Dreaming of Gold, Dreaming of Home*, 166.

¹⁹² *Ibid.*, 20.

Chunxuan (岑春煊), a reported \$300,000 just for permission to build his railway.¹⁹³ In fact, antagonistic encounters between Chen and government officials occurred so frequently that Chen eventually purchased an official position for himself so that he would not have to bribe officials.¹⁹⁴ Despite his best efforts, Chen was continuously confronted by villagers who refused to sell their lands and found himself having to constantly remap the railway's route because of these obstacles. Chen might have seen railways as a natural part of the environment and a natural path to national redemption, but it is clear that not everyone thought as he did. One of the greatest challenges he faced as a consequence of this was building a path over the Niuwan River in southern Xinhui for the railway to cross. Although the river was only about 100 meters wide, it was very deep and required technical expertise he did not have. The absence of an engineering establishment and a system of technological education made it so that he alone possessed the greatest railroad engineering experience available. Köll describes this as an institutional problem that "involved transferring new technology and hardware to an environment that lacked the necessary software in the form of an engineering knowledge system and technically trained human resources."¹⁹⁵ Abiding by his promise to investors that the railway would be a self-reliant endeavor, Chen refused to consult with foreign railway technicians and was compelled to devise alternative means of crossing the river.

These unabating obstacles during the railway's first stage of construction bore a considerable expense, and Chen found himself in a considerable amount of debt by 1910, before he was able to build the line to Jiangmen, the vital gateway to Hong Kong. In 1911, he sent a

¹⁹³ Chen Bang, "Aiguo huashang Chen Yixi yu Xinning tielu" 愛國華商陳宜禧與新寧鐵路 [Patriotic Overseas Merchant, Chen Yixi, and the Xinning Railroad.] *Taishan wenshi* 台山文史, no. 9 (1987): 46-58.

¹⁹⁴ Mo Xiuping, 莫秀萍, "Wei e tongxiang yong qianqiu – aiguo Huaqiao Chen yixi liu" 巍峨銅像永千秋-愛國華僑陳宜禧略 [A Majestic Bronze Statue for Eternity – A Biography of the Patriotic Overseas Chinese, Chen Yixi], *Journal of Wuyi University* 4 (1991): 51-52.

¹⁹⁵ Köll, *Railroads and the Transformation of China*, 51.

letter appealing to the Chinese Consolidated Benevolent Association in San Francisco. In order to extend the line by approximately eighty miles from Xinhui to Jiangmen, his company needed \$1.2 million. He wrote, “previously when we sold shares to raise capital for the Xinning Railroad, we amassed over \$2 million in a few months. What is the reason for the earlier enthusiasm and current apathy?”¹⁹⁶ He wondered “if it is because the overseas Chinese are unfamiliar with China’s way of conducting business and might have been deceived by false rumors, or been led astray by mischief makers, and, as a consequence, a lot of misgivings are keeping potential shareholders away.”¹⁹⁷ On the one hand, Chen blames migrants for their ignorance and unwary credulity – the benighted “overseas Chinese” “unfamiliar with China’s way of conducting business” who have been “deceived” and “led astray.” On the other hand, by delineating between “overseas Chinese” and “China,” Chen also distinguishes overseas migrants from the national space, a pronounced shift in tone from his previous campaign that so enthusiastically absorbed overseas Chinese capital. Furthermore, by metonymically substituting “overseas Chinese” for “potential shareholders,” national identity is made fungible with financial investment. Under the influence of capital, the boundaries of his nation are fluid – migrants are at times incorporated into the nation, and at others distinguished from it.

Their ignorance and guile can be overcome, however. “Earlier this month,” Chen explains to the association, “I traveled to Hong Kong for a fundraising meeting. Fortunately, the various [Taishanese] business leaders stationed in or visiting Hong Kong, who understood what was at stake and who were interested in the public good, each offered a loan of \$5,000. In a few days we had pledges over \$100,000.”¹⁹⁸ He commends the businessmen for their appreciation of

¹⁹⁶ Judy Yung, Gordon H. Chang, H. Mark Lai, *Chinese American Voices: From the Gold Rush to the Present* (Berkeley: University of California Press, 2006), 126.

¹⁹⁷ Ibid.

¹⁹⁸ Ibid, 127.

the gravity of the situation and their interest in public good. His use of the term “stake” here invokes financial calculations that involve speculative appraisals of the railway’s worth. With the proper leadership “we can clarify the misunderstandings so that everyone will work together” and “it will not be difficult to build a mountain from earth, and form a river from streams.”¹⁹⁹ In addition to implementing engineering knowledge systems and training institutions, the letter shows how the development of China’s national railways also required developing methods of calculation by inculcating new disciplines and desires. By reformulating a railway building project into a nation building project, Chen aligns financial investment with civic duty. Both classes of overseas Chinese have their responsibilities laid out for them. “Our problem lies in our lack of leadership to dispel the existing misconceptions,” he complains, persuading the merchants to serve as guides, redirecting the misinformed labourers towards the correct path in the nation building project. In this uneven and hierarchical relationship between migrant workers and merchants, Chen’s letter exposes the contradictions in his conception of a homogenous Chinese nation that is indiscriminate towards processes of migration.

The Benevolent Association responded to Chen’s letter by calling on overseas Chinese to invest in the Xinning Railway, and the line to Jiangmen was built in two years. In 1917, Sun Yat-sen encouraged Chen to build a commercial port in Tonggu to compete with the Hong Kong. As with the railway, problems obtaining funding obstructed the project and it was never completed. As time went on, Chen made repeated appeals to the Seattle Chamber of Commerce, the U.S. consul general at Guangzhou, the U.S. minister of the American legation in Beijing, and even the Rockefellers, all from whom he obtained a \$1 million U.S. dollar loan, with 8-percent interest.²⁰⁰ In its entirety, the railway was an impressive 137-kilometres long connecting Taishan, Doushan,

¹⁹⁹ Ibid.

²⁰⁰ Hsu, *Dreaming of Gold, Dreaming of Home*, 172.

Baisha, Gongyi, and Jiangmen. But it never reached Guangzhong, much less the rest of China, southeast Asia, Europe, and the rest of the world. With the onset of the Second World War and the Japanese invasion of Guangzhou in 1938, provincial authorities ordered the dismantling of all local railroads, including the Xinning Railway, to prevent the Japanese military from usurping these technologies. By February 1939, all the locomotives and rolling stock had been hidden, dismantled, and transported elsewhere. In a few short months, the railway that had taken over thirty years to build suddenly no longer existed and would never be rebuilt.

Historians have largely attributed the growing apathy towards Chen's project to his borrowing from foreign banks and his failure to adhere to the principle of self-reliance for which he lost his prestige amongst the migrant community.²⁰¹ This explanation, however, fails to consider the instability of Chen's discourse of national "self-reliance." As my analysis of the Xinning Railway shows, from its inception, Chen used the transcontinental railway's Great Northern line as the blueprint for his project and heeded the advice imparted by Western empire builders like James Hill. His life in the United States and his first-hand experience constructing the transcontinental railways were determining forces shaping the development of the Xinning Railway. As Chen himself acknowledged in his diaries, his friendships with the American railroad barons had fundamentally transformed his conception of self: "Could I ever be what I am if it wasn't for Seattle men?" When Chen Yixi and Yu Zhou first received funding from overseas migrants, these material and symbolic transnational ties did not seem to bother them. They also did not seem to disprove of the fact that Chen depended heavily on the West for the equipment, machinery, and fuel. He bought the railway's locomotives and rolling stock from American and German companies and imported coal from Europe. The fortunes he obtained by

²⁰¹ See: Cheng, Liu & Zheng, "Chinese Emigration, the Sunning Railway and the Development of Toisan"; Lew-Williams "The Remarkable Life of a Sometime Railroad Worker"; Hsu, *Dreaming of Gold, Dreaming of Home*.

facilitating U.S. territorial expansion—building railways and brokering Chinese labour—was the product of trans-Pacific connections. These factors belie the railway’s purported self-reliance.

Like most railways of its era, the Xinning Railway symbolised national power but was shaped by overlapping transnational influences. A close examination of these trans-Pacific connections shows how throughout China’s struggle to nationalize railways under the banner of self-reliance, a range of transnational connections persisted. Illuminating these global connections, my reading of Chen’s railroad enterprise reveals the process by which the nation-state, and conceptions of national identity, are discursively produced. My study of this period shows how early railway development in China involved negotiating the multiple ways in which Chinese people saw railroad infrastructures, inculcating new methods of financial calculation as overseas migrants became investors and shareholders, establishing distinctions between the “foreign” and the domestic, and the emergence of a national consciousness. These railway institutions helped bind modern infrastructure development with national strength, promoting new conceptions and practices of national citizenship.

In the end, the Xinning Railway met the same fate as the Shanghai-Wusong line. Both lived short lives before they were dismantled by government officials during times of war. Shen Baozhen was able to salvage the Wusong railway and transport its parts to Taiwan as a means of defense against Japanese encroachment, but he was not able to rebuild it. Guangdong provincial authorities ordered the dismantling of railways but did not ship rolling stock elsewhere. In many ways, Shen Baozhen and Chen Yixi were driven by the same belief that railway construction was not only a means of defending the nation against foreign encroachment but developing it as well. These two figures exemplify the ways in which Chinese people were neither passive nor reluctant recipients of western technologies but were active participants in the development of

railway infrastructures throughout the 19th and early 20th centuries, even if the political symbolism of the railways exceeded their technological function.

The transport of railway infrastructure to the island of Taishan shows how foreign railways in China were not only sites of imperial presence, but a means through which Qing officials established settler-colonial policies and sought to modernize and develop its colonies. By situating the history of the Wusong line in conversation with the Xinning Railway, I have shown how a multitude of forces shaped China's modern infrastructure development. Overseas Chinese migrants who were themselves entangled in U.S. settler-colonial processes, were also instrumental in financing and advocating for China's railway construction. Chen Yixi used the Pacific Northwest and the transcontinental railway as a framework through which he articulated his national enterprise, showing how America's railroad imperialism critically informed China's.

CONCLUSION

Today, Chen Yixi's hopes of building a railway connecting China with Southeast Asia and Europe has been reinvigorated by President Xi Jinping's Belt and Road Initiative, a global long-term investment program aimed at promoting infrastructure development and the economic and political integration of countries along the ancient Silk Road.²⁰² At the Belt and Road Forum International Cooperation on May 14th, 2017, President Xi's opening speech by invoking the transcontinental passages connecting Asia, Europe, and Africa paved by "our ancestors, trekking across vast steppes and deserts," "navigating rough seas," known today as the ancient Silk Road.²⁰³ More than overland and maritime passages however, President Xi also characterises these historic routes as an ethos, a "Silk Road spirit," that has served as "a great heritage of human civilization," manifesting the spirit of peace and cooperation, accelerating human progress, openness and inclusiveness, mutual learning and mutual benefit.²⁰⁴ At once material and immaterial, concrete and symbolic, President Xi's description of the Belt and Road Initiative synthesises what this thesis has sought to explore through my analysis of early railroad development projects in the United States and China.

Embodying this cooperative spirit are Du Huan (杜環) and Zheng He (鄭和) of China, Marco Polo of Italy, and Ibn Buttata of Morocco, who President Xi remembers today not for their conquests, but as "friendly emissaries leading camel caravans and sailing treasure-loaded ships," who have "opened windows of friendly engagement among nations, adding a splendid

²⁰² When President Xi first unveiled this project during his visit to Kazakhstan in 2013, the project was initially titled the "Silk Road Economic Belt and the 21st Century Maritime Silk Road" (絲綢之路經濟帶和 21 世紀海上絲綢之路發展戰略) and was initially abbreviated as the "One Belt One Road" (一帶一路).

²⁰³ Xi Jinping, "Work Together to Build the Silk Road Economic Belt and the 21st Century Maritime Silk Road," transcript of speech delivered at the National Convention Center, Beijing, China, May 14th, 2017. <https://china.usc.edu/president-xis-speech-opening-belt-and-road-forum-may-14-2017> (Accessed May 28th, 2022).

²⁰⁴ Ibid.

chapter to the history of human progress,” though “peace and East-West cooperation.”²⁰⁵ By invoking the intrepid heroes from China, as well as from Italy and Morocco, President Xi’s address presents the Belt and Road Initiative as the reinvigoration of a universal desire for human cooperation, thereby de-emphasising China’s strategic geopolitical interests in carrying out the enterprise. As the Chinese government’s official description of the initiative states, “the Belt and Road Initiative originated in China, but it belongs to the world.”²⁰⁶ Like Asa Whitney’s envisioning of the Transcontinental Railroad which emphasises the benefits the railroad will bring to mankind, President Xi’s invocation of the Silk Road similarly espouses the global, rather than national, scope of the initiative by drawing on the familiar rhetoric of East and West harmonious exchange.

However, as Susan Whitfield, Daniel Waugh, Håkan Wahlquist, James D. Sidaway, Chih Yuan Woon, and Tamara Chin’s studies on the Silk Road has demonstrated, the protagonists of the ancient Silk Road did not imbue their missions with the same cosmopolitan vision underpinning these contemporary invocations.²⁰⁷ Indeed, President Xi’s invocation of the ancient Silk Road is in many ways, a reinvention of an already invented concept.²⁰⁸ By characterising these historical figures as emissaries dedicated to the “friendly engagement among nations,”

²⁰⁵ Xi Jinping, “Work Together to Build the Silk Road Economic Belt and the 21st Century Maritime Silk Road.”

²⁰⁶ “The Belt and Road Initiative: Progress, Contributions and Prospects,” The Belt and Road Initiative (Permanent Mission of the People’s Republic of China to the United Nations Office at Geneva and Other International Organizations in Switzerland), <https://www.mfa.gov.cn/ce/cegv/eng/zywjyjh/t1675564.htm>. (Accessed May 26th 2022)

²⁰⁷ For a discussion of the invention of the “Silk Road” in the 1870s, see: Susan Whitfield, “Was There a Silk Road?” *Asian Medicine* 3, no. 2 (2007): 201-213; Daniel Waugh, “Richthofen’s “Silk Roads”: Toward the Archaeology of a Concept.” *The Silk Road* 5, no. 1 (2007): 1-10; Tamara Chin, “The Invention of the Silk Road, 1877,” *Critical Inquiry* 40 (2013): 194-219 and “The Afro-Asian Silk Road: Chinese Experiments in Postcolonial Premodernity” *PLMA* 136, no. 1 (2021); Håkan Wahlquist, “Albert Herrmann: A Missing Link in Establishing the Silk Road as a Concept for Trans-Eurasian Networks of Trade,” *Environment and Planning C: Politics and Space* 38, no. 5 (2020): 803-808; James D. Sidaway & Chih Yuan Woon, “Chinese Narratives on “One Belt, One Road” (一帶一路) *The Professional Geographer* 69, no. 4 (2017): 591-603

²⁰⁸ Tamara Chin, “The Invention of the Silk Road, 1877,” *Critical Inquiry* 40 (2013): 194-219. Chin refers to the ancient Silk Road as an invention, and the modern Silk Road as a reinvention.

President Xi makes an ahistorical move claiming these individuals as national representatives, neglecting to mention that the modern world of nation-states had not existed at the time, while also failing to observe the religious and spiritual motivations guiding these early missions. More importantly, President Xi does not acknowledge that the “Silk Road” itself was a relatively recent invention that dates back to the 1870s, which entered Chinese as a neologism of European geographers.

Uncovering the imperial ambitions underlying the emergence of the “Silk Road,” Waugh and Chin locate the origins of the term (*die Seidenstraße*) back to a multivolume geological survey of China conducted by the German geologist, Baron Ferdinand von Richthofen (1833-1905), who first used the term in 1877. Richthofen’s surveys of China were funded by European and American business corporations, along with the German empire, and aimed at mapping for his financiers the best possible routes for introducing railways in China at a time when the Qing government opposed foreign railway construction. Inspired by the completion of the first Transcontinental Railway in 1869, Richthofen proclaimed in his report to the European-American Chamber of Commerce in Shanghai that “little doubt can exist that, eventually, China will be connected with Europe by rail.”²⁰⁹ Richthofen’s proposed route began west of Xi’an, went around the Tarim Basin in the Xinjiang region, to Europe, which he called the “Silk Road.” A geologist by training, Richthofen endowed this route with geological providence, baldly asserting that because coal could be found in abundance along his “Silk Road,” “there is scarcely an instance on record, where so many favourable and essential conditions co-operate to concentrate all future intercourse on so long a line upon one single and definite channel.”²¹⁰

²⁰⁹ Baron Ferdinand von Richthofen, “Northern Shensi,” in *Baron Richthofen’s Letters, 1870-1872*, 151-152. Quoted in Chin, “The Invention of the Silk Road, 1877,” 210.

²¹⁰ Ibid.

While the presence of coal was an important factor in supporting early railway construction in China, Chin argues that what Richthofen's maps fail to mention is the full significance of Xinjiang as a contested region amongst the British, Russian, and Qing empires.²¹¹ Thus, from its inception, the "Silk Road" was instrument of imperial conquest and expansion.

Later, the "Silk Road" was popularised by Richthofen's student, Sven Hedin (1865-1952), a Swedish geographer who led an international Sino-Swedish Expedition carrying out geographical surveys of Central Asia between 1927-1935. These surveys were subsequently published in Hedin's international bestseller, *The Silk Road* (1936), where he implored the Chinese Nationalist government (GMT) to help construct "one of the greatest and richest arteries of world trade" linking Shanghai, Xi'an, Kashgar, Istanbul, and Boulogne.²¹² Touching upon the familiar theme of railway development as a vehicle of East and West exchange, Hedin describes the Silk Road as a means of realising civilisational unity:

It should facilitate trade communications within the Chinese Empire and open a new traffic route between the East and the West. It should unite two oceans, the Pacific and the Atlantic; two continents, Asia and Europe; two races, the yellow and white; two cultures, the Chinese and the Western. Everything that is calculated to bring different peoples together, to connect and unite them, should be greeted with sympathy at a time when suspicion and envy keep the nations asunder.²¹³

His proposed railroad connecting China and Europe dissolves spatial distance ("two oceans, the Pacific and the Atlantic; two continents, Asia and Europe"), erodes racial difference ("the yellow and white"), and undermines cultural distinctions ("the Chinese and the Western"). Yet underlying this utopic vision of civilisational unity lurks imperialist undertones characterising

²¹¹ Chin, "The Invention of the Silk Road, 1877," 211.

²¹² Sven Hedin, *The Silk Road: Ten Thousand Miles Through Central Asia* (London: George Routledge & Sons, Ltd, 1936), 233.

²¹³ *Ibid.*, 233-234.

Central Asia as a vast open space open for development. Through Hedin's conception of the "Silk Road," "new fields would be opened to exploration, more easily reached than those of today, and darkest Asia would be made accessible to culture and development," when "caravan and horses' bells have been exchanged for the noise of steam-whistles and hooters."²¹⁴ With this developmentalist vision guiding the expedition, Hedin writes, "we set out upon our long journey eastward along the Silk Road, and while the splendid pictures of the past, one by one, sank beneath the western horizon, new and glorious prospects rose up daily in the east under the morning sun."²¹⁵ Indeed, if early American national biographies and Asa Whitney's Transcontinental Railroad project produced the discursive figure of China as an untapped market for American commerce, Hedin substitutes China with Central Asia as the new frontier for development and commercial exchange.

While President Xi neither credits Richthofen and Hedin's invention and popularisation of the "Silk Road" as we conceive of it today, nor acknowledges the term's entanglements with the longer histories of imperialism and colonialism through which the "Silk Road" emerged, it is precisely this imperial legacy that the Belt and Road Initiative draws on today. When Richthofen first invoked the "Silk Road" in his geological surveys on behalf of American and European powers, it was for the purposes of facilitating infrastructural development. The Belt and Road Initiative similarly stresses the importance of infrastructural development to facilitate peaceful trade and diplomacy between nations. When Hedin popularised the term in the early 20th century, he celebrated the route from China to Europe via Central Asia for ushering East and West harmonious exchange, and the opening up of the "darkest Asia" to exploration and modern

²¹⁴ Ibid., 234.

²¹⁵ Ibid.

development. President Xi likewise invokes the language of peaceful East and West cooperation in China's current infrastructural investment programme as it forces open the Uyghur heartland to Han settler-migration and Chinese commerce. Along with the construction of railways, the Belt and Road Initiative has also introduced new widespread surveillance technologies including biometric data collection, implemented new policing measures targeting Uyghurs, and the enforcement of Uyghur detention and "re-education camps."²¹⁶ The new technologies introduced as a result of the Belt and Road Initiative that have entrapped Uyghurs in webs of surveillance and biometric control restricting their movement and cultural practices calls into question the rhetoric of peace and cooperation, accelerating human progress, openness and inclusiveness, mutual learning and mutual benefit that the initiative champions.²¹⁷

As I have illustrated through my analysis of the Transcontinental Railway, the discourse of "East and West" embracing through infrastructure development has a long history. It was not only Richthofen, Hedin, or President Xi who invoked it. Asa Whitney's transcontinental highway proposal also exercised this rhetoric by depicting the railway as a bridge connecting Asia and Europe through America. In Whitney's imagination, the Transcontinental Railroad would open and secure a means of transit for American products to the markets of Asia, to consolidate a basis for national union, and to reinvigorate American agricultural, manufacturing, and commercial interests through commerce with China. This sensationalist imagination not only drew upon the romance of the East established in the post-Revolutionary period's early American national biographies, but also gave fresh impetus to this romance of China by

²¹⁶ Darren Byler, "Surveillance, Data Police, and Digital Enclosure in Xinjiang's 'Safe Cities,'" *Xinjiang Year Zero*, edited by Darren Byler, Ivan Franceshini, & Nicholas Loubere (Canberra: Australian National University Press, 2022), 184-203.

²¹⁷ Darren Byler, "The Social Life of Terror Capitalism Technologies in Northwest China," *Public Culture* 34, no. 2 (2022): 167-193.

contributing to it the romance of the West. Yoking the romance of the East with the romance of the West through the Transcontinental Railroad, Whitney presented the western frontier as a place of uninhabited wilderness that the railroad would transform into a place of settlement and production by developing California into a great commercial depot. The logic of settlement, production, and development that characterises the Transcontinental Railroad's romance of the West bears striking similarities to the emphasis the Belt and Road Initiative places on connecting and developing the Xinjiang Uyghur Autonomous Region in northwest China. Although the two projects were conceived centuries apart, headed by different imperial powers, and involve different technologies, there is a lot to be learned by tracing the historical continuities between the two: What is the relationship between infrastructure development and indigenous dispossession? How might we enrich our understanding settler-colonialism and racial capitalism in Xinjiang and in North America by studying infrastructures? In what ways do infrastructures serve as spatial fixes to the problem of economic stagnation and capital overaccumulation?²¹⁸ How does the language of development driving infrastructure construction obfuscate the destruction of ecologies? These are just a few questions that emerge when we think about infrastructures relationally rather than comparatively.

Thinking relationally between infrastructures also endows us with a more capacious framework that allows us to draw connections between infrastructure projects. Rather than studying the histories of these infrastructure projects as a series of distinct and detached episodes, I have sought to think through the continuities between the first Transcontinental Railroad, the imperial struggle for railway concessions in China, the Shanghai-Wusong Railway

²¹⁸ Tim Summers, "China's 'New Silk Roads': Sub-National Regions and Networks of Global Political Economy," *Third World Quarterly* 37, no. 9 (2016): 1628-1643.

line, the Xinning Railway, the Great Northern Railway line, Richthofen and Hedin's "Silk Road," and the current Belt and Road Initiative. For it is only by considering and teasing out these linkages that we can think beyond the nation-state framework by considering the process by which the nation-state and national identity are historically configured, and situate these projects in dialogue within a global system. As my exploration of these railways have shown, imperial processes including settlement, development, and colonialism are deeply integrated with modern infrastructural development. Lisa Lowe proposes that sustained consideration of these integrated global relations requires attention to the "scenes of close connection in relation to a global geography that one more often conceives in terms of vast spatial distances."²¹⁹ More than a lens through which to view these scenes of close connections, advancements in transportation infrastructures both materialize and enables these encounters as well.

²¹⁹ Lisa Lowe, *Intimacies of Four Continents*. Durham: Duke University Press, 2015. 18.

BIBLIOGRAPHY

- “Article LXXI: Phrenological Character of Asa Whitney, with a Likeness.” *American Phrenological Journal* 11 (1849): 329–333.
- Alsford, Niki. *Transitions to Modernity in Taiwan: The Spirit of 1895 and the Cession of Formosa to Japan*. New York: Routledge, 2018.
- Appleby, Joyce. *Inheriting the Revolution: The First Generation of Americans*. Cambridge: Harvard University Press, 2000.
- Bain, David Haward. *Empire Express: Building the First Transcontinental Railroad*. London: Penguin Books, 2000.
- Barak, On. *On Time: Technology and Temporality in Modern Egypt*. Berkeley: University of California Press, 2013.
- Bartky, Ian R. “The Adoption of Standard Time.” *Technology and Culture* 30, no. 1 (1989): 25–56.
- Bodenhord, Howard. *State Banking in Early America: A New Economic History*. Oxford: Oxford University Press, 2003.
- Brown, Margaret L. “Asa Whitney and His Pacific Railroad Publicity Campaign.” *The Mississippi Valley Historical Review* 20, no. 2 (1933): 209–224.
- Byler, Darren. “Surveillance, Data Police, and Digital Enclosure in Xinjiang’s ‘Safe Cities.’” In *Xinjiang Year Zero*, eds. Darren Byler, Ivan Franceshini, & Nicholas Loubere, 184–203. Canberra: Australian National University Press, 2022.
- . “The Social Life of Terror Capitalism Technologies in Northwest China.” *Public Culture* 34, no. 2 (2022): 167–193.
- Cary, Thomas G. & Thomas Handasyd Perkins. *Memoir of Thomas Handasyd Perkins, Containing Extracts from His Diaries and Letters: With an Appendix*. Boston: Little & Brown. 1856.
- Casper, Scott E. *Constructing American Lives: Biography and Culture in Nineteenth-Century America*. Chapel Hill: University of North Carolina Press, 1999.
- Chang, Gordon H. “Chinese Railroad Workers and the US Transcontinental Railroad in Global Perspective.” In *The Chinese and the Iron Road*, ed. Gordon H. Chang and Shelley Fisher Fishkin, 27–41. Stanford: Stanford University Press, 2019.

- Chang, Gordon H., Shelley Fisher Fishkin & Hilton Obenzinger. *The Chinese and the Iron Road*. Stanford: Stanford University Press, 2019.
- Chapman, Michael E. "Taking Business to the Tiger's Gate: Thomas Handasyd Perkins and the Boston-Smyrna-Canton Opium Trade of the Early Republic." *Journal of the Royal Asiatic Society* 52 (2012): 7-28.
- Chappell, Jonathan. "Developmentalism in Late Qing China, 1874-1911." *The Historical Journal* 64, no. 1 (2021): 98-120.
- Chen, Bang. "Aiguo huashang Chen Yixi yu Xinning tielu" 愛國華商陳宜禧與新寧鐵路 [Patriotic Overseas Merchant, Chen Yixi, and the Xinning Railroad.] *Taishan wenshi* 台山文史, no. 9 (1987): 46-58.
- Chen, Yong. *Chinese San Francisco 1850-1943*. Stanford: Stanford University Press, 2000.
- Cheng, Lucie, Liu Yuzun & Zheng Dehua. "Chinese Emigration, the Sunning Railway and the Development of Toisan." *Amerasia Journal* 9 no. 1 (1982): 59-74.
- Chin, Tamara. "The Afro-Asian Silk Road: Chinese Experiments in Postcolonial Premodernity." *PLMA* 136, no. 1 (2021): 17-38.
- . "The Invention of the Silk Road, 1877." *Critical Inquiry* 40, (2013): 194-219.
- Chung Sai Yat Po* 中西日報 [East West Daily News], 30 November 1904.
<https://oac.cdlib.org/ark:/13030/hb2489p06v/?brand=oac4>
- Collier, Stephen J. *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics*. Princeton: Princeton University Press, 2011.
- Connell, Carol Matheson. "Jardine Matheson & Company: The Role of External Organization in a Nineteenth Century Trading Firm." *Enterprise & Society* 4, no. 1. (2003): 99-138.
- Crush, Peter. *Woosung Road: The Story of China's First Railway*. Hong Kong: The Railway Tavern, 1999.
- Currie, Blair C. "The Woosung Railroad (1872-1977)." In *Papers on China Vol. 20*. East Asian Harvard Research Center. Cambridge: Harvard University Press, 1966.
- Dearinger, Ryan. *The Filth of Progress: Immigrants, Americans, and the Building of Canals and Railroads in the West*. Berkeley: University of California Press, 2015.
- Deverell, William F. *Railroad Crossing: Californians and the Railroad, 1850-1910*. Berkeley: University of California Press, 1994.

- Dobbin, Frank. *Forging Industrial Policy: The United States, Britain, and France in the Railway Age*. Cambridge: Cambridge University Press, 1994.
- Dowd, Charles F. *System of National Time and Its Applications, by Means of Hour and Minute Indexes, to the National Railway Time-Table*. New York: Weed, Parsons, & Co., 1870.
- Downs, Jacques. *The Golden Ghetto: the American Commercial Community at Canton and the shaping of American China Policy, 1784-1844*. Hong Kong: Hong Kong University Press, 2015.
- Drake, James D. "A Davide to Heal the Union: The Creation of the Continental Divide." *Pacific Historical Review* 84, no. 4 (2015): 409-447.
- Duara, Presenjit. *Rescuing History from the Nation: Questioning Narratives of Modern China*. Chicago: University of Chicago Press, 1995.
- Elleman, Bruce, Elisabeth Köll, and Y. Tak Matsusaka. *Manchurian Railways and the Opening of China: An International History*. New Jersey: Taylor and Francis, 2015.
- Fichter, James R. *So Great a Proffit; How the East Indies Trade Transformed Anglo-American Capitalism*. Cambridge: Harvard University Press, 2010.
- Flath, James A. "The Chinese Railroad View: Transportation Themes in Popular Print, 1873-1915." *Cultural Critique* 58 (2004): 168-190.
- Foucault, Michel. *The Birth of Biopolitics: Lectures at the College de France, 1978-1979*. Edited by Michel Senellart and translated by Graham Burchell. New York: Palgrave MacMillan, 2008.
- Fresonke, Kris. *West of Emerson: The Design on Manifest Destiny*. Berkeley: University of California Press, 2003.
- Greenfield, Mary C. "Benevolent Desires and Dark Dominations: The Pacific Mail Steamship Company's *SS City of Peking* and the United States in the Pacific 1874-1910." *Southern California Quarterly* 94, no. 4 (2012): 423-478.
- Gross, Daniel P. "Collusive Investments in Technological Compatibility: Lessons from U.S. Railroads in the Late 19th Century." *Management Science* 66, no. 12 (2020): 5683-5700.
- Haddad, John. *America's First Adventure in China: Trade, Treaties, Opium, and Salvation*. Philadelphia: Temple University Press, 2014.
- . *The Romance of China: Excursions to China in U.S. Culture, 1776-1876*. New York: Columbia University Press, 2008.
- Hayes, Augustus A. "The First Railroad in China." *Harper's Magazine* Vol 58, December 1878.

- He Shubin 何書彬. *Dongfang xiyatu zhimeng* 東方西雅圖之夢 [Dreams of the East in Seattle]. *Da lishi* 大歷史 8 (2012).
- Hedin, Sven. *The Silk Road: Ten Thousand Miles Through Central Asia*. London: George Routledge & Sons, Ltd., 1936.
- Herr, Kincaid A. *The Louisville and Nashville Railroad, 1850-1962*. Lexington: University of Kentucky Press, 2019.
- Hillman, Jonathan E. *The Emperor's New Road: China and the Project of the Century*. New Haven: Yale University Press, 2020.
- Hirano, Katsuya, Lorenzo Veracini & Toulouse-Antonin Roy. "Vanishing natives and Taiwan's Settler-Colonial Unconsciousness." *Critical Asian Studies* 50, no. 2 (2018): 196-218.
- Horsman, Reginald. *Race and Manifest Destiny: The Origins of American Racial Anglo-Saxonism*. Cambridge: Harvard University Press, 1981.
- Hsu, Hsuan. *Geography and the Production of Space in Nineteenth-Century American Literature*. Cambridge: Cambridge University Press, 2010.
- Hsu, Madeline Y. *Dreaming of Gold, Dreaming of Home: Transnationalism and Migration between the United States and South China, 1882-1943*. Stanford: Stanford University Press, 2000.
- Huenemann, Ralph William. *The Dragon and the Iron Horse: The Economics of Railroads in China 1876-1937*. Cambridge: Harvard University Press, 1984.
- Imperial Chinese Maritime Customs. *Treaties, Conventions, etc. between China and Foreign States*. Shanghai: Statistical Department of the Inspectorate General of Customs, 1908.
- International Conference Held at Washington for the Purpose of Fixing a Prime Meridian and a Universal Day. October 1884. Protocols of the Proceedings*. Washington: Gibson Bros., Printers and Bookbinders, 1884.
- Irigoin, Alejandra. "The End of a Silver Era: The Consequences of the Breakdown of the Spanish Peso Standard in China and the United States, 1780s-1850s." *Journal of World History* 20, no. 2 (2009): 207-243.
- Johnson, Kendall. *The New Middle Kingdom: China and the Early American Romance of Free Trade*. Baltimore: John Hopkins University Press, 2017.
- Karuka, Manu. *Empire's Tracks: Indigenous Nations, Chinese Works, and the Transcontinental Railroad*. Berkeley: University of California Press, 2019.

- Kent, Percy H. *Railway Enterprise in China: An Account of Its Origin and Development*. London: Edward Arnold, 1907.
- Köll, Elisabeth. *Railroads and the Transformation of China*. Cambridge: Harvard University Press, 2019.
- Kornel Chang, *Pacific Connections: The Making of U.S.-Canadian Borderlands*. Berkeley: University of California Press, 2012.
- Larkin, Brian. "The Politics and Poetics of Infrastructure." *Annual Review of Anthropology* 42 (2013): 327-343.
- Lee, En-Han. *China's Quest for Railway Autonomy, 1904-1911*. Singapore: Singapore University Press, 1977.
- Lee, Julia H. *The Racial Railroad*. New York: New York University Press, 2022.
- Lepler, Jessica M. *The Many Panics of 1837: People, Politics, and the Creation of a Transatlantic Financial Crisis*. Cambridge: Cambridge University Press, 2013.
- Lew-Williams, Beth. *The Chinese Must Go: Violence, Exclusion, and the Making of the Alien in America*. Cambridge: Harvard University Press, 2018.
- . "The Remarkable Life of a Sometime Railroad Worker: Chin Gee Hee, 1844-1929." In *Chinese and the Iron Road*, ed. Gordon H. Chang, Shelley Fisher Fishkin & Hilton Obenzinger, 329-345. *The Chinese and the Iron Road*. Stanford: Stanford University Press, 2019.
- Lydia Liu, *The Clash of Empires: The Invention of China in Modern World Making*. Cambridge: Harvard University Press, 2004.
- Loomis, Nelson H. "Asa Whitney: Father of Pacific Railroads." *Proceedings of the Mississippi Valley Historical Association* 6 (1913): 166-75.
- Lowe, Lisa. *The Intimacies of Four Continents*. Durham: Duke University Press, 2015.
- Luxemburg, Rosa. *The Accumulation of Capital*. London: Routledge Press, 2003.
- Miner, H. Craig. *A Most Magnificent Machine: America Adopts the Railroad, 1825-1862*. Lawrence: University Press of Kansas, 2010.
- Marsh, Leonard. *Apocatastasis; or, Progress Backward*. Vermont: Chauncey Goodrich, 1854.
- Martin, W.A.P. *A Cycle of Cathay or China, South and North*. New York: F.H. Revell Co., 1897.

- Marx, Karl. *Capital: Volume One: A Critique of Political Economy*. London: Penguin Publishing Group, 1992.
- Mattelart, Armand. *Networking the World: 1794-2000*. Minneapolis: University of Minnesota Press, 2000.
- McKeown, Adam. "Global Migration and Regionalization, 1840-1940." Paper presented at the Mapping Global Inequalities Conference, Santa Cruz, California, December 2007.
- Meiton, Fredrik. "Boundary-Work and the Origins of the Arab-Israeli Conflict." *Past & Present* 231, no. 1 (2016): 201-236.
- Mo, Xiuping 莫秀萍. "Weie tongxiang yong qianqiu – aiguo huaqiao Chen Yixi lue" 巍峨銅像永千秋-愛國華僑陳宜禧略 [A Majestic Bronze Statue for Eternity – A Biography of the Patriotic Overseas Chinese, Chen Yixi]. *Journal of Wuyi University* 4 (1991): 51-52.
- Norwood, Dael A. *Trading Freedom: How Trade with China Defined Early America*. Chicago: University of Chicago Press, 2022.
- "Opening of the Woosung Railway to Kungwang." *The North China Herald*, July 1st, 1876.
<https://primarysources.brillonline.com/browse/north-china-herald-online/volume-1876-issue-477-18760701;nch18760340477>
- Osterhammel, Jürgen. "Semi-Colonialism and Informal Empire in Twentieth Century China: Towards a Framework of Analysis." In *Imperialism and After: Continuities and Discontinuities*, ed. Wolfgang J. Mommsen & Jürgen Osterhammel, 290-314. London: Allen & Unwin, 1986.
- Papers Relating to the Foreign Relations of the United States, Transmitted to Congress, With the Annual Message of the President, December 4, 1876, China*, ed. Daniel J. Lawler and Erin R. Mahan. Washington: Government Printing Office, 2010. Document 39.
<https://history.state.gov/historicaldocuments/frus1876/d39>
- Pong, David. "Confucian Patriotism and the Woosung Railway." *Modern Asian Studies* 7, no. 4 (1973): 647-676.
- Prather, William N. "Sui Sin Far's Railroad Baron: A Chinese of the Future." *American Literary Realism, 1870-1910* 29, no. 1 (1996): 54-61.
- Puffert, Douglas J. *Tracks Across Continents, Paths Through History: The Economic Dynamics of Standardization in Railway Gauge*. Chicago: University of Chicago Press, 2009.
- Proceedings of the American Railway Association Vol. 1*. Cambridge: American Railway Association, 1893.
- Rifkin, Mark. *Manifesting America: The Imperial Construction of U.S. National Space*. Oxford: Oxford University Press, 2010.

- Russell, Arthur J. *East and West Shaking Hands at Laying of Last Rail*. May 10, 1869. Photograph. Photographs taken during construction of the Union Pacific Railroad Collection, Beinecke Rare Book and Manuscript Library, New Haven, Connecticut. <https://collections.library.yale.edu/catalog/2014909>.
- Schivelbusch, Wolfgang. *The Railway Journey: The Industrialization of Space and Time in the Nineteenth Century*. Berkeley: University of California Press, 2014.
- Shaw, Samuel and Josiah Quincy. *The Journals of Major Samuel Shaw: The First American Consul at Canton*. Boston: Wm. Crosby and H.P. Nichols. 1847.
- Sidaway James D. & Chih Yuan Woon. "Chinese Narratives on "One Belt, One Road" (一帶一路)." *The Professional Geographer* 69, no. 4 (2017): 591-603.
- Smith, Henry Nash. *Virgin Land: The American West as Symbol and Myth*. Cambridge: Harvard University Press, 1970.
- Stanford, Leland. *Central Pacific Railroad Statement Made to the President of the United States, and Secretary of the Interior, on the Progress of the Work, October 10th, 1865*. Sacramento: H.S. Crocker & Co., Printers. 1865.
- Strom, Claire M. *Profiting from the Plains: The Great Northern Railway and Corporate Development of the American West*. Seattle: University of Washington Press, 2003.
- Summers, Tim. "China's 'New Silk Roads': Sub-National Regions and Networks of Global Political Economy." *Third World Quarterly* 37, no. 9 (2016): 1628-1643.
- Tao, Shixiu 陶詩秀, "Xinning tielu chuangbanren he zonggong chengshi" 新寧鐵路創辦人和總工程師-陳宜禧 [Founder and Chief Engineer of Xinning Railway – Chen Yixi] *Yunan Archives* 2, (2019): 45-46.
- "The Belt and Road Initiative: Progress, Contributions and Prospects," The Belt and Road Initiative (Permanent Mission of the People's Republic of China to the United Nations Office at Geneva and Other International Organizations in Switzerland). <https://www.mfa.gov.cn/ce/cegv/eng/zywjyjh/t1675564.htm>
- "The Pacific Railroad: The Last Rail Laid and the Last Spike Driven." *The New York Daily Herald*, May 11, 1869. <https://www.newspapers.com/clip/30024059/transcontinental-railroad-completion/>
- "The Railroad Celebration in San Francisco." *Sacramento Daily Union*, May 10, 1869. <https://cdnc.ucr.edu/?a=d&d=SDU18690510.2.5&srpos=23&e=-----186-en--20--21-byDA-txt-txIN-transcontinental+railroad----1869---1>
- Thomas, William G. *The Iron Way: Railroads, the Civil War, and the Making of Modern America*. New Haven: Yale University Press, 2011.

- Todd, John. *The Sunset Land; or, The Great Pacific Slope*. London: Hodder and Stoughton, 1869.
- U.S. Congress. House of Representatives. *Railroad to Oregon: Report No. 733 (to Accompany H.R. Bill No. 468)*. 13th Congress, 1st Session, June 23, 1848.
- U.S. Congress. Senate. Committee on Foreign Relations. *Common Prime Meridian: Senate Report*. 47th Congress, 1st Session, 1882.
- U.S. Congress. International Conference. *International Conference Held at Washington for the Purpose of Fixing a Prime Meridian and a Universal Day: Protocols of the Proceedings*. October 1, 1884.
- Von Schnitzler, Anita. "Water, Calculability, and Techno-Politics in South Africa." *Journal of Southern African Studies* 34, no. 4 (2008): 899-917.
- Wahlquist, Håkan. "Albert Herrmann: A Missing Link in Establishing the Silk Road as a Concept for Trans-Eurasian Networks of Trade." *Environment and Planning C: Politics and Space* 38, no. 5 (2020): 803-808.
- Wilkes, George. *Project of a National Railroad from the Atlantic to the Pacific Ocean for the Purpose of Obtaining a Short Route to Oregon and the Indies*, 4th ed. New York: Daniel Adey Printer, 1847.
- Ye, Shirley. "Corrupted Infrastructure: Imperialism and Environmental Sovereignty in Shanghai, 1873-1911." *Frontiers of History in China* 10, no. 3 (2015): 428-456.