

REVIEW ARTICLE

On the Road: New Approaches to Infrastructure and Society

Andreas Greiner 

German Historical Institute Washington DC, Washington, DC, USA
Email: greiner@ghi-dc.org

Dirk van Laak, *Lifelines of Our Society: A Global History of Infrastructures* (Cambridge, MA: MIT Press, 2023), 314 pp., 40.00 \$, ISBN: 0262546388.

Andrew Denning, *Automotive Empire: How Cars and Roads Fueled European Colonialism in Africa* (Ithaca, NY: Cornell University Press, 2024), 366 pp., 53.95 \$, ISBN: 1501775367.

Thomas Zeller, *Consuming Landscapes: What We See When We Drive and Why It Matters* (Baltimore, MD: Johns Hopkins University Press, 2022), 264 pp., 55.00 \$, ISBN: 1421444826.

Lyubomir Pozharliev, *The Road to Socialism: Transport Infrastructure in Socialist Bulgaria and Yugoslavia (1945–1989)* (Göttingen: V&R Unipress, 2023), 325 pp., 50.00 € [Open Access], ISBN: 3847110047.

Jack Reid, *Roadside Americans: The Rise and Fall of Hitchhiking in a Changing Nation* (Chapel Hill, NC, 2020), 264 pp., 29.95 \$, ISBN: 1469655004.

Roads generate, amplify and symbolise power relations. State-sponsored infrastructure systems such as the Roman *Via Appia*, Qin China's road network or the pre-Columbian Inca roads all were meant to serve as instruments of spatial and social transformation. Roads direct human movement, thereby reshaping both mobility and the space through which they cut, including by providing authorities with the means to carry governance upcountry.¹ The road, if we follow Michel Foucault, is a 'crystallization of state power'.² This perception is backed by the laden symbolism of roadways in history. Not only are roads prime spaces for protest, but their very materiality is political as well. Since at least the July Revolution of 1830, revolutionaries in Paris and elsewhere have repeatedly dug up paving stones to use them as weapons. Art historian Kathrin Rottmann contends that the act of 'removing the orderly arranged paving stones symbolized an attack on the established political order'.³ The barricades, which were set up on a large scale for the first time during this revolution, also served to strip the authorities of their monopoly on mobility.⁴ Roadblocks have since developed into an effective form of protest. Recently, German climate activists sparked national outrage by enforcing

¹James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CT: Yale University Press, 1998), 73–6.

²Michel Foucault et al., 'Equipments of Power: Town, Territories and Collective Equipments', in *Foucault Live: Interviews 1966–84*, ed. Sylvère Lotringer (New York: Semiotexte, 1996), 106–7.

³Kathrin Rottmann, 'Pflasterstein', in *Handbuch der politischen Ikonographie*, vol. 2, ed. Uwe Fleckner, Martin Warnke and Hendrik Ziegler (Munich: Beck, 2011), 228.

⁴Mark Traugott, 'Barricades as Repertoire: Continuities and Discontinuities in the History of French Contention', *Social Science History* 17, no. 2 (1993): 309–23.

roadblocks, gluing themselves to road surfaces in an attempt to pressure politicians to act on the climate crisis. Being a visible manifestation of the state in everyday life, road construction and operation have been seen as a litmus test for statehood itself and have often represented a crystallisation of its limits.

While the state and the road are inextricably connected, many fields of modern history writing have sought to decentre statehood in their analyses, instead studying the levels beneath (e.g. the history of everyday life or cultural history) or above (e.g. through transnational and global history). In the midst of these trends, infrastructure history has demonstrated its strength in bringing different layers into conversation. Observing a surge in academic output on historical infrastructures, Mary Bridges emphasised in 2023 that

the state remains a central actor; nonetheless, infrastructure studies make space for other actors, institutions, and material forces to play a similarly pivotal role. [. . .] An infrastructure-based approach [. . .] enables historians to see change from below and above by focusing on what happens in the middle layers.⁵

Studying infrastructure thus ‘provides a timely and important way to understand long-term connections, hidden power dynamics and the durability of systems’ and ‘can help reveal the large-scale impacts of small, day-to-day processes’.⁶

Bridges’ observations on the infrastructural turn in our profession reflect the agenda of a growing body of literature. Among the many publications on roads in history, Frank Schipper’s book *Driving Europe* (2008) particularly showcases the ability of an infrastructure-based approach to zoom in and out: studying the growth of Europe’s road network(s) between the 1920s and 1960s, Schipper uses roads to offer an alternative account of European integration, ranging from grand schemes drawn on maps down to discussions about the size of the country code on car plates.⁷ Infrastructure also has the opportunity to add localised perspectives to global history. Jennifer Hart’s book *Ghana on the Go* (2016) and Joshua Grace’s *African Motors* (2021), to give two examples from historians of Africa, both show how people in Ghana and Tanzania before and after independence embraced motorisation and transformed driving into a distinctively African mode of mobility. In doing so, both authors challenge still-prevalent assumptions about the top-down, North–South diffusion of technology. Instead of a division between ‘modern’ and ‘backward’ means of transport, car cultures around the world often fused with other (older) forms of mobility, a phenomenon historian Gijs Mom recently described as ‘layeredness’.⁸

While earlier historians of technology have often focused purely on technological artefacts, the mentioned authors instead view road construction and operation as reflections of broader societal trends, emphasising that roads both amplified and spurred these trends. Like them, many scholars working on roads are particularly interested in ‘technopolitics’, that is the specific society–economy–politics nexus that produced infrastructure and was shaped by it in return.⁹ Recent studies investigate knowledge production and circulation, power relations and processes of socio-spatial

⁵Mary Bridges, ‘The Infrastructural Turn in Historical Scholarship’, *Modern American History* 6, no. 1 (2023): 110–6.

⁶*Ibid.*, 104, 111. For theoretical approaches to infrastructure, see also Nikhil Anand, Akhil Gupta and Hannah Appel, eds., *The Promise of Infrastructure* (Durham, NC: Duke University Press, 2018); Brian Larkin, ‘The Politics and Poetics of Infrastructure’, *Annual Review of Anthropology* 42 (2013): 327–43; AbdouMaliq Simone, ‘People as Infrastructure: Intersecting Fragments in Johannesburg’, *Public Culture* 16, no. 3 (2004): 407–29.

⁷Frank Schipper, *Driving Europe: Building Europe on Roads in the Twentieth Century* (Amsterdam: Amsterdam University Press, 2008).

⁸Jennifer Hart, *Ghana on the Go: African Mobility in the Age of Motor Transportation* (Bloomington: Indiana University Press, 2016); Joshua Grace, *African Motors: Technology, Gender, and the History of Development* (Durham, NC: Duke University Press, 2021); Gijs Mom, *Globalizing Automobility: Exuberance and the Emergence of Layered Mobility, 1900–1980* (New York: Berghahn, 2020).

⁹For this term, see Gabrielle Hecht, *The Radiance of France: Nuclear Power and National Identity after World War II* (Cambridge, MA: MIT Press, 1998).

inclusion and exclusion, among other topics.¹⁰ Infrastructure deployment in the colonial world has received particular attention.¹¹ At the same time, research has not lost sight of the artefacts themselves (e.g. the actual road or the automobile) and maintains a keen interest in questions of construction, maintenance and repair. Especially the human factor, long overlooked, has received increased attention – that is the users and producers (such as planners and labourers) as well as their experiences.¹² The five monographs reviewed in this essay explore these diverse topics and their interconnections to varying degrees. They are all centred on roads and (auto)mobility in the twentieth century.

Dirk van Laak's *Lifelines of Our Society*, a translation of a book initially published in German in 2018, is a perfect starting point. It offers a compelling tour de force through the history of infrastructure, providing us with a concrete understanding of an otherwise abstract concept. Primarily focusing on Europe, and Germany in particular, van Laak defines infrastructure as 'everything stable that enables human beings, goods and ideas to circulate' (5). This includes roads, railroads, waterways, telegraph cables, sewage systems and waste management, urban transformation, public transport, the tourism industry, smartphones and automobiles, among others – all of which are explored in the book's first three chapters. Studying 'how infrastructures have changed everyday life by forging new routines, standards of conduct, and expectations' (5) over the past 200 years, van Laak highlights a range of tasks that planners hoped these different artefacts would fulfil: open up spaces and let goods circulate; divide and distribute labour; signify modernity; reprogramme social behaviours; exercise political and social control; bring military victory; restore peace in war-torn Europe; facilitate and legitimise the process of colonisation in Africa; and develop post-colonial countries in the global South.

Such sky-high expectations are necessarily bound to be disappointed. Van Laak engages with the symbolic value of these large-scale projects, and the disillusion often produced by their construction and operation, in one of the four more thematic chapters of the book's second part. In another thematic chapter, he illustrates the temporality of these assemblies, because they either are

¹⁰See, among many others, Massimo Moraglio, *Driving Modernity: Technology, Experts, Politics, and Fascist Motorways, 1922–1943* (New York: Berghahn, 2017); Thomas Zeller, 'Imaging Landscapes, Roads, Race, and Power', *Technology and Culture* 64, no. 4 (2023): 1261–73; Peter D. Norton, *Fighting Traffic: The Dawn of the Motor Age in the American City* (Cambridge MA: MIT Press, 2008); Lee Vinsel, *Moving Violations: Automobiles, Experts, and Regulations in the United States* (Baltimore, MD: Johns Hopkins University Press, 2019); Ryan Reft, Rebecca C. Tetzlaff and Amanda K. Philips de Lucas, eds., *Justice and the Interstates: The Racist Truth about Urban Highways* (Washington, DC: Island Press, 2023). For overviews, see Andreas Greiner, Carolin Liebisch-Gümüß, Mario Peters and Roland Wenzlhuemer, 'Roads to Exclusion: Introduction', *Journal of Transport History* 45, (2024), no. 3, 634–45; and Alexis De Greiff A., Ericka L. Herazo and Joan Sebastian Soto Triana, 'Local, Global and Fragmented Narratives about Road Construction: An Invitation to Look Beyond our Disciplinary Space', *Journal of Transport History* 41, no. 1 (2020): 6–26.

¹¹The classic is Daniel R. Headrick, *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (Oxford: Oxford University Press, 1981). More recent studies include Dirk van Laak, *Imperiale Infrastruktur: Deutsche Planungen für eine Erschließung Afrikas 1880 bis 1960* (Paderborn: Ferdinand Schöningh, 2004); Jan-Bart Gewald, Sabine Luning and Klaas van Walraven, *The Speed of Change: Motor Vehicles and People in Africa, 1890–2000* (Leiden: Brill, 2009); Sarah Kunkel, 'Forced Labour, Roads, and Chiefs: The Implementation of the ILO Forced Labour Convention in the Gold Coast', *International Review of Social History* 63, no. 3 (2018): 449–76; Libbie Freed, 'Networks of (Colonial) Power: Roads in French Central Africa after World War I', *History and Technology* 26, no. 3 (2010): 203–23; Andreas Greiner, 'Colonial Schemes and African Realities: Vernacular Infrastructure and the Limits of Road Building in German East Africa', *Journal of African History* 63, no. 3 (2022): 328–47.

¹²See, for instance, Ronald Kline and Trevor Pinch, 'Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States', *Technology and Culture* 37, no. 4, (1996), 763–95; Jacob Harris, '"Car, Car Over All, It Has Taken a Terrible Hold of Us": Experiencing Automobility in Interwar Britain and Germany', *Journal of Transport History* 44, no. 3 (2023): 411–35; Robert Heinze, 'Fighting over Urban Space: Matatu Infrastructure and Bus Stations in Nairobi, 1960–2000', *Africa Today* 65, no. 2 (2018): 2–21; Shawn William Miller, *The Street Is Ours: Community, the Car, and the Nature of Public Space in Rio de Janeiro* (Cambridge: Cambridge University Press, 2018); Gretchen Sorin, *Driving while Black: African American Travel and the Road to Civil Rights* (New York: Liveright Publishing, 2020); Mia Bay, *Traveling Black: A Story of Race and Resistance* (Cambridge, MA: Harvard University Press, 2021).

superseded by new systems or age and decay. Security threats, natural disasters and labour disputes further diminish our confidence in infrastructure. A third thematic chapter focuses on us: as users, we not only have been conditioned to behave appropriately when using public transport but also have increasingly assumed roles once held by operators. With users in mind, the fourth chapter elaborates on the relation between public and private investment. More broadly, the book engages with the question of who constitutes the ‘public’ in the term ‘public works’ and what defines the common interest. Strikingly, forced labour, especially in Europe’s African colonies, was regularly employed to provide infrastructure, while Jews in Nazi Germany and African Americans in Jim Crow America were systematically denied access, as the author briefly mentions. Although this systemic violence has disappeared from European and North American contexts, since the 1970s, protest movements against large-scale infrastructure have repeatedly questioned whom these projects are really meant to serve.

The four thematic chapters help tie the book together, while van Laak consciously refrains from pursuing an overarching theory. It is particularly commendable that he does not frame the history of infrastructure development in the tradition of the *grand seigneur* of the history of technology, Thomas P. Hughes, as a story of ‘system builders’ – that is, geniuses and inventors – but rather as a social history that encompasses many of his readers.¹³ Expanding the scope beyond Europe and North America, further than van Laak does here and in line with his previous research on imperial infrastructure, would have allowed him to delve deeper into some of the regional differences and specificities and might have led to a strengthening or even re-evaluation of some of his insights.¹⁴ That said, *Lifelines of Our Society* is an engagingly written and well-researched book. Its panoramic view of infrastructures in their various forms and contexts offers a successful introduction to an abstract yet ubiquitous subject and an ideal entry point for further research on infrastructures worldwide.

In Andrew Denning’s enlightening book *Automotive Empire*, we find such an engagement with another world region, Africa, the specificities of infrastructure construction there and the ‘technopolitics’ of imperial motorisation. Denning takes his readers on a loosely chronologically arranged tour through road building and car usage in colonial Africa, focusing on the first four decades of the twentieth century. Making their colonies accessible through transport lanes was one of the primary goals of colonial administrations. Denning identifies motor roads as the main approach to accomplishing this goal before the Second World War and traces this ‘transimperial European project’ (17) across the French, German, British and Italian empires.

The book presents a number of case studies, such as French Madagascar, where road works were meant to bring all regions within the reach of the central administration and fuel economic development. For the construction process, a force of Malagasy tax workers was employed who dug the roads with picks and shovels. At the centre of the second case study is Paul Graetz, a former German colonial official, who returned to German East Africa (modern-day Tanzania, Burundi, Rwanda) in 1907 with an off-road car to cross the continent. However, the car broke down less than 200 miles from its starting point.

Cars as artefacts are also at the centre of the ensuing case studies. For a regular automotive service across the French Sahara, French car manufacturers Citroën and Renault joined the colonial project – a constellation described as the ‘colonial–industrial complex’ (116) – to develop vehicles fit for desert conditions. In the mid-1920s, the Citroën company also outfitted a trans-African expedition with its new vehicle. While this did little to help sell the half-tracked *autochinelle*, the expedition’s media coverage marketed the French empire in the metropole. In its colonies, roads became the centrepiece

¹³Thomas Hughes, *Networks of Power: Electrification in Western Society 1880–1930* (Baltimore, MD: Johns Hopkins University Press, 1983); Thomas Hughes, *American Genesis: A Century of Invention and Technological Enthusiasm* (New York: Viking Penguin, 1989).

¹⁴van Laak, *Imperiale Infrastruktur*.

of the civilising mission and economic development (*mise en valeur*). In the name of progress and civilisation, unfree African labour conducted the road works under gruelling conditions. By zooming in, Denning also highlights the spaces of negotiation and instances of resistance at the workplace. Meanwhile, the British Empire saw fierce debate over whether rail or road should be considered the superior option. Eventually, roads were relegated to a role of ‘mere capillaries to railway arteries’ (144), a decision that made Britain an outlier in the transimperial automotive project.

In the two final chapters, the book turns to fascist Italy and its belated African colonial project. Highways, *autostrade*, were an important element of fascist propaganda at home in the 1920s and soon became a showcase of Italian ambitions in its fledgling African empire with a coastal highway being built in Libya in the late 1930s. After the invasion of Ethiopia in 1935, the fascists conceived a programme for a network of 2,855 miles of paved roads. To them, ‘roads marked the transition from warfare to colonization. [...] In reality, road construction was simply the continuation of war by other means’ (248) as construction took the form of military campaigns.

Overall, Denning’s excellent book is an important addition to recent studies on colonial transportation. The book frames the relationship between state and technology as mutually reinforcing insofar as the ‘colonial state built infrastructure [...] [and] infrastructure simultaneously built the colonial state’ (24). By 1940, Africa’s road networks had grown to over 350,000 miles in length, with more than 750,000 vehicles in operation – at least on paper. This, however, is not a success story. Breakdown and decay defined all infrastructure projects. Denning’s conclusion about the colonial state’s ability to manifest itself in space is thus mixed. It confirms existing research on the strength of colonial statehood, which often had the ad-hoc power to recruit workers but exhibited general structural weaknesses in managing both population and territory. To better understand this contradiction, the book would have benefited from a more thorough exploration of how the roads were used after construction works were finished: how did colonial ‘men on the spot’, officials whose mode of governance usually took the form of lengthy district tours, integrate auto-mobility into their administrative routines? Notwithstanding this critique, *Automotive Empire* is a perfect example of how a transregional approach to infrastructure history proves extremely fruitful in uncovering overarching structures, processes and mutual influences – while also paying close attention to local differences and interactions on the micro-social level and their impact on the broader schemes.

Mutuality is also at the centre of Thomas Zeller’s monograph *Consuming Landscapes*. Applying a transatlantic perspective, it investigates the interconnected history of parkways and scenic roads in inter-war Germany and the United States, focusing on the Alpine Road in Bavaria and the Blue Ridge Parkway in North Carolina and Virginia. The book begins with a paradoxical yet true observation: ‘one of the primary twentieth-century ways of experiencing nature for North Americans and Europeans became to drive through it’ (2). Zeller attributes the boom in parkway and highway construction to what he calls ‘roadmindedness’, a new mindset describing ‘the idea that roads are worthy in and of themselves’ (6). In the United States, this idea gained prominence during the inter-war years, when Americans owned more cars than the rest of the world combined and when an outdoor tourism industry began to emerge. In 1926, the National Park Service took over control of road planning and provision in its parks. Zeller identifies the consolidation phase up until this point, as well as the large-scale planning that followed, as an interconnected history. International congresses and publications fostered the circulation of knowledge across borders so that by the 1930s road planners drew from an ‘international design vocabulary’ (175).

To underscore this observation, the author introduces us to the careers of Alwin Seifert in Germany and Gilmore D. Clarke in the United States. Both landscape architects shared the same vision for the design of parkways: roadside landscaping had to be arranged in a way that ‘drivers and passengers would be able to immerse themselves in scenery’ (55). US parkways posed a key reference for the aesthetics of future German highways. Clarke’s projects such as the Bronx River Parkway were

followed by Seifert and other projectors in Weimar Germany, including engineer Fritz Todt, who then worked for a road construction company in Munich.

With the Nazi takeover in 1933, Todt became a key figure in Germany's modernisation-through-motorisation project, supervising construction of the autobahn. Zeller finds that, in a nationalist spirit, architects and planners sought to conceal the American inspiration behind their autobahn. Yet, 'when Todt commissioned Seifert to provide his first landscaping advice for the autobahn, the engineer introduced the notion of a "Parkstraße", clearly referring to American parkways' (77). This encapsulates the essence of Zeller's book. While diligently acknowledging the stark differences between planning a road in democratic America and in a dictatorship, he still points us to the 'remarkable similarities in approach, vision and execution of scenic infrastructures in Nazi Germany and the United States during the New Deal' (175).

Unfortunately, we do not learn much about the reciprocity of this influence, apart from a brief mention of US officials touring Nazi Germany and meeting Todt in 1936 and 1938. Still, the book successfully uncovers the parallels in the planning and construction of the Blue Ridge Parkway and the Alpine Road, which became a centrepiece of German propaganda after 1933. Both roads were built during the Great Depression, making them 'visible efforts to overcome economic calamities and put people to work' (86). In the planning process of both roads, there was debate over route alignment in the Appalachians and the Alps, with the idea of creating automobility that directed tourists' gaze. In both cases, residents were ignored and sometimes evicted and displaced. Violence played a role in the Alpine project, where prisoners from Dachau Concentration Camp were deployed to build some of the infrastructure. The use of the road was also segregated, as German Jews' driver licences were invalidated and confiscated in 1938. In the United States, too, parkway construction could turn into a violent process. Entire communities were removed to simulate a pristine, pre-industrialised nature. After the Second World War, in light of environmentalism and civil activism, the idea that both roads could be attractions in their own right faded, as the author demonstrates through tourist guidebooks. By the 1960s, the focus in the United States had clearly shifted from parkways to multi-lane highways, even though Lady Bird Johnson's Highway Beautification Bill (1965) preserved some of the earlier principles.

Zeller's in-depth study of parkways skilfully demonstrates how roads became gateways to nature. At least for the inter-war decades, combining the road and the landscape resolved the obvious contradiction that enhanced automobility in fact threatens the environment. The author effectively outlines how this thought process evolved over time, and how planners developed and implemented their visions of what drivers should experience and see. One slight shortcoming of the book is that the experience of road users is less emphasised, leaving us with limited insight into the extent to which drivers followed planners' prompts and how they actually consumed landscapes. Still, *Consuming Landscapes* excels in uncovering the transatlantic flows in road planning, shedding light on the influence of American parkways on German scenic roads and the parallels between both.

Road planning in southeast Europe during the Cold War era is at the heart of Lyubomir Pozharliev's study *The Road to Socialism*. Despite this title, the author centres his study less around the socialist future, to which new roads could lead, and more around a national future in the Socialist Federal Republic of Yugoslavia and the People's Republic of Bulgaria. Studying 'the connection between building transport infrastructure and building a nation' (44), the book explores the impact of infrastructure planning on national homogenisation, pointing to its both unifying and separating effects in fragile young states.

With this agenda, the study of roads becomes a study of state making and of spatial rearrangement. Especially in the case of Yugoslavia, the forging of a collective identity was the ultimate promise of large-scale road building. The Brotherhood and Unity Highway, whose construction began in 1949, traversed the country from the northwest to the southeast. As its name suggests, for Prime Minister Josip Broz Tito and the central government in Belgrade, the highway served as 'the tangible symbol of the federation – of the peaceful coexistence of the various Yugoslav peoples and of their new common

Yugoslav identity' (82). This vision also reverberated in the construction process, which was primarily driven by the organised youth labour movement, the youth brigades. In the first phase of construction, 250,000 volunteers took part. After the early 1950s, road construction was decentralised, and the role of the central government further weakened in the 1970s. The single national republics now became crucial financiers of the project.

The author draws a negative conclusion about the effect the highway ultimately had: 'the disintegrating function of the road infrastructure turned out to be stronger than the integrative one, creating separate centers and large peripheries' (14). From the outset, the highway was never meant to unify the entire country and completely bypassed Bosnia and Herzegovina, Montenegro and Kosovo, instead connecting Yugoslavia's economically most developed regions. Moreover, while individual car ownership was comparatively high in the Socialist Federal Republic, it was unevenly distributed between regions. Infrastructure investment primarily flowed into areas with higher car ownership, in this way furthering regional imbalances. The project thus reflected the hidden hierarchies between these regions, and the highway eventually reinforced them. At the same time, following the Tito–Stalin split, the highway helped Yugoslavia align more closely with Western Europe by opening the country to foreign tourism and commercial trucks.

Pozharliev's chapters each examine specific aspects of infrastructure expansion in both Yugoslavia and Bulgaria, thereby allowing for a detailed exploration of parallels and differences. While there existed many similarities, there were also stark contrasts: because even by the 1960s almost no cars existed in Bulgaria, road investment remained minimal and localised efforts dominated over nationwide schemes. Only in the early 1970s did the country embark on a large-scale infrastructure project, the 1,000-kilometre-long 'Highway Ring', of which only 273 kilometres of road had been constructed by the end of the People's Republic in 1990. Still, the blueprints give us an idea of what this project was about: a self-contained highway ring looping through Bulgaria, but with almost no access roads to the state borders. This loop was intended to close off the country, 'consistent with the efforts to isolate the country – both economically and politically – from western capitalism' (310). This inward orientation ultimately also reinforced the marginalisation of border regions with considerable Muslim and Turkish populations.

Pozharliev's archival work unearths much previously unseen material from the national archives of the respective countries. Through his meticulous analysis of these sources, in both the text and the many tables and figures complementing it, he highlights the different approaches to infrastructure development in southeast Europe as well as the many similarities in the planning and construction processes. Ultimately, he traces the politics behind these projects, which, despite all claims, 'aimed to disintegrate and prioritize certain people and communities over others' (221). The author deserves much credit for highlighting a region that has played a minimal role in English-language writings on infrastructure history so far, and his findings are a much-needed addition to studies on road networks in post–Second World War Europe, such as the one by Frank Schipper mentioned earlier.

The final book reviewed in this essay takes a user-centred approach to studying infrastructure. Jack Reid's *Roadside Americans* offers a compelling account of US social history since the 1920s through the lens of hitchhiking, 'the once ubiquitous act of soliciting rides from a passing vehicle' (2). Looking at this phenomenon from three angles – the experience of hitchhikers and drivers (gathered mostly through published travel accounts), media coverage and legislation – and in chronological order, the study seeks to understand how hitchhiking first gained popularity during the 'larger social and political changes' (2) of contemporary history, and how this contested mode of mobility then virtually disappeared.

A close connection between the acceptance of hitchhiking and shifting economic tides becomes evident when examining the inter-war years and the period of the Second World War, a time characterised by necessity: unable to afford vehicles and unemployed due to the Great Depression, many men adopted a nomadic lifestyle on the road in search of work. These hitchhikers were generally seen

in a favourable light, representing a Protestant work ethic and frontier spirit. During the war, soldiers hitchhiking to and from their bases were a common sight and offering a lift became regarded as a contribution to the war effort. In a time of tyre and gasoline rations, ridesharing even became part of the official propaganda, encapsulated in the telling slogan ‘When you ride alone you ride with Hitler!’ (49).

This marked the last time the state promoted hitchhiking. After the war, the tone of media coverage began to darken, with more reports focusing on crimes associated with vagrant hitchhikers, culminating in an anti-hitchhiking campaign launched by the FBI in the mid-1950s. As car ownership became common, hitchhiking was no longer seen as a necessity, being pushed to the fringes of society and regarded as a safety threat. Yet, this social marginalisation in post-war America made it particularly attractive to subcultures like the emerging Beat Generation. They reinterpreted the unpredictability of hitchhiking as a chance for self-discovery, a rite de passage out of the suburban neighbourhoods where many of the mostly white and male travellers came from. Through the 1960s, hitchhiking remained a search for adventure.

The late 1960s to mid-1970s then marked the zenith of hitchhiking in the United States, largely due to the spread of counterculture and the hippie movement that swept across the country. For the first time, female travellers were seen on the road in large numbers. Hippies carried on the travel traditions of earlier generations. At the same time, ‘the act of hitchhiking became a key point of confrontation’ (134) and the car cabin was turned into an arena for broader societal culture wars, as conservative drivers picked up hitchhikers only to lecture and criticise them during the ride. As more people gathered along the roads, concerns grew within communities both because of traffic safety and because hippies were associated with drug use and immoral behaviour. Official reactions were mixed. Some city administrations, for instance in Santa Cruz, CA, sought to ban the practice of hitching a ride, while the states of Washington, Oregon and Connecticut simultaneously recognised hitchhiking as a valuable low-carbon-footprint travel method given the growing concerns over traffic congestion, pollution and the oil crisis.

The history of hitchhiking after the mid-1970s is one of rapid decline. As the entire counterculture movement waned, riding alone also disappeared as a mass phenomenon among the white middle classes. Instead, it increasingly became the travel method of an emerging class of jobless migrants or those in low-paying work. This time, however, opportunity-seekers were not seen as industrious pioneers, as they had been during the Great Depression. Instead, during the Reagan era and after, American media increasingly linked hitchhikers to homelessness and crime, a theme that Hollywood horror movies eagerly embraced. Since then, the discourse surrounding hitchhiking has remained largely negative, and hitchhikers have become a rare sight today. In sum, Reid’s straightforward and engaging account convincingly conveys the idea that interactions on the road were a mirror of society at large. His conclusion that ‘[b]ecause ride solicitation intersects with so many aspects of American life, we can see the rise and eventual fall of hitchhiking during the twentieth century as a manifestation of wider social, economic, and cultural transformations’ (180) directs us to broader themes in the study of historical infrastructure and its relationship with the surrounding socio-political environment. These themes resonate throughout all the books reviewed here, and I outline their common threads in the remainder of this essay.

Infrastructure was a promise.¹⁵ As van Laak aptly highlights in his study, the expectations were vast. Besides being considered a path to modernity, we found a variety of other purposes in the different studies presented here. We encounter state institutions and their agents as actors driving this technological promise in all reviewed books, whether in terms of planning, financing and procurement or through legal regulation. As ‘technopolitics’, their actions were tied back to society: the extent to which the state was willing to promote automobility was influenced by not only technology but

¹⁵ Anand, Gupta, and Appel, *The Promise of Infrastructure*.

also, and more so, societal debates and the broader political and economic situation. Socialist planners, for instance, believed that transport arteries had the potential to unify different regions into a single territory and recalibrate social relations within. Nation building, as in this case, was also a de facto driving force in the parkway construction projects of the inter-war period – a patriotic endeavour designed to stimulate national pride in the beautiful landscape. In the ‘automotive empires’ of colonial Africa, road works were at the same time believed to enhance control and the valorisation of colonial economies.

The state produced infrastructure as much as infrastructure produced the state: by bringing the studies into dialogue, we see that a key ambition was to create new social bonds and reorganise spaces into manageable territories, thereby taming nature for consumption or exploitation. For successful road construction, the state had to expand its own institutions, including planning departments and the organisation of labour. Interestingly, the car’s promise of modernisation did not necessarily translate into the actual building process: rather than modern machinery and equipment, as Denning shows, manual African labour remained central in road construction. The violence inherent in infrastructure expansion becomes evident in the forced recruitment of these workers.

All studies pay close attention to whom the promises entailed in infrastructure expansion actually applied, and who was excluded or endangered by those same promises. In the most extreme case, infrastructure systems were used for mass disenfranchisement and murder, as van Laak reminds us: ‘The image of the track leading to the gates of Auschwitz has become an icon of twentieth-century horror’ (78). Van Laak refers to this role of infrastructure as ‘misuse’, but the different studies demonstrate that violence permeates infrastructure on many levels, be it in the form of crimes associated with hitchhiking, the marginalisation of entire population groups, as Pozharliev’s study evidences, or the forced relocation for the beautification of parkways. Zeller points to the continuities of infrastructural violence into the post-war decades when African American neighbourhoods were bulldozed to make way for thoroughfares connecting white suburbs to city centres.

In his book *Machines as the Measure of Men*, historian Michael Adas famously describes how infrastructure and technology came to symbolise European superiority by the nineteenth century.¹⁶ As Denning correctly adds, kilometres of roads ‘made European progress materially measurable’ (274). However, this perception as a symbol of state power often turned out to be detrimental as roads revealed their vulnerability. Road construction failed not only due to the inadequate allocation of finances, as observed in Yugoslavia and Bulgaria, but also because of the wear and tear from regular use. The degree of disrepair had consequences for both the state and society. On a discursive level, as van Laak points out, the lack of road maintenance ‘suggests an unfavorable state of society as a whole’ (194). In terms of everyday interactions, their poor upkeep had wider implications for spatial, and thus social, relations. In Yugoslavia, for instance, ‘the poor maintenance of the road was a political issue inasmuch as it led to the isolation of entire regions’, as Pozharliev writes (195). The promise of infrastructure thus remained unfulfilled.

The five monographs reviewed in this essay address the history of infrastructure from multiple layers. They span from grand designs that often remain little more than blueprints to the perspective of individuals at the roadside, such as hitchhikers, colonial workers and residents. By exploring the on-the-ground situations that determined the success of construction, alongside the transatlantic and transimperial exchange of knowledge and the broader societal issues affecting the planning, these works help us to understand the frequent and significant contradictions between promise and reality. There are still some topics to be explored further in future studies, such as the intersection of different forms of transportation, particularly rail and road in Europe. Still, the presented works are

¹⁶Michael Adas, *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance* (Ithaca, NY: Cornell University Press, 1989).

prime examples of the emerging infrastructural turn. By offering insights from the ground level to a bird's-eye view of large-scale planning, all authors demonstrate that it is the ability to zoom in and out that makes an infrastructure-based approach so powerful. Historians working in all fields, even those who have had no prior interest in infrastructure, should keep a keen eye on this emerging strand of research and learn from it, as roads provide a meaningful lens for the broader study of societies.