Patrick Bek

No Bicycle, No Bus, No Job

The Making of Workers' Mobility
in the Netherlands, 1920-1990

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Studies in History, Technology and Society

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Introduction

In 1973, Dutch carpenter K. could not travel to his new job. For working people like him, the time and cost of getting to work are a crucial aspect of daily life. According to mobility historians, for most people, the opportunity to travel increased over the course of the twentieth century. This was not the case for everyone. International scholarship since the late 1960s has shown that the absence of affordable housing near work locations combined with a lack of safe, efficient, and affordable mobility options aggravate social exclusion for some. From this perspective, leading mobility researchers call for studying—but have yet to detail—how (uneven) power relations have historically enabled or inhibited people's mobility.[1] Historians have not followed up this call. While labor historians have a long tradition of analyzing power in relation to blue-collar workers' physical movements within factories and affordable nearby company housing, they have not studied in-depth the everyday commute. *No Bicycle, No Bus, No Job* redresses these omissions by researching how workers' mobility and job accessibility changed over time, and who contributed to this change in twentieth century Netherlands.

The case of K. illustrates how mobility was—and continues to be—an important resource for workers to capitalize on opportunities in modern liberal societies, built around the expectations of self-reliant and highly mobile citizens. Amid the recession following the 1973 oil crisis and global wave of deindustrialization, socialist newspaper *Het Parool* (1975) reported that 22-year-old carpenter K. was on trial for refusing what authorities deemed "suitable work." In light of layoffs, he had reported to the Regional Employment Office (Gewestelijk Arbeidsbureau, GAB), but the job offer meant traveling 11 km to work, a distance he considered too great: K. had neither a car nor access to public transit. He did own a bicycle, which was so old he could not

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1   Tim Cresswell, "Towards a Politics of Mobility," *Environment and Planning D: Society and Space* 28, no. 1 (2010): 17-31; Gijs Mom, Colin Divall, and Peter Lyth, "Towards a Paradigm Shift? A Decade of Transport and Mobility History," in *Mobility in History: The State of the Art in the History of Transport, Traffic and Mobility*, ed. Gijs Mom, Gordon Pirie, and Laurent Tissot (Neuchâtel: Editions Alphil, 2009), 13-40; Mimi Sheller and John Urry, "The New Mobilities Paradigm," *Environment and Planning A* 38, no. 2 (2006): 207-226.

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ride it to work, he said. And, unlike his previous firm, the new employer did not offer company bus transportation. Because K. felt he had no viable mobility options to commute 11 km, he declined the job offer. The government agency, following the letter of the law, stopped K.'s unemployment benefit. Later, the Board of Appeal (Raad van Beroep) and Labor Council (Centrale Raad voor Arbeid) acknowledged that a daily cycle or moped commute came with "a certain inconvenience," especially in bad weather. Still, the Council deemed K. able-bodied enough to cycle to work. He should repair his bicycle or buy another one—second hand if necessary. They decided that "a healthy young man" bore responsibility for his own mobility access to work—a ruling that established key jurisprudence for future court cases.[2]

This legal landmark case illustrates the close relationship between (im)mobility and job accessibility. The controversy also shows different interpretations of who was responsible for the commute—and that the issue of how to get to work had become political. K.'s appeal and subsequent rejection both mark a pivotal moment in how the state and employers thought about who was responsible for facilitating workers' commute. Covering five industrial regions in the Netherlands since the 1920s, *No Bicycle, No Bus, No Job* shows how the locus of control shifted between workers, employers, and the government in addressing workers' (im)mobility. Workers and employers—against the backdrop of twentieth century economic booms and busts, wartime destruction and postwar recovery, periods of scarcity and affluence—were key in shaping the everyday commute. Until the 1970s at least, the state took a back seat. The global wave of deindustrialization and onset of neoliberal public governance, however, heralded a transformation. It left workers like K. to their own devices.

The problem has not ceased. Since 2003, research by Susan Kenyon and others on transport-related social exclusion provides ample evidence of how mobility barriers, (job) accessibility, and social exclusion reinforce each other into a downward spiral to poverty.[3] Following earlier international research, Dutch social geographers Jeroen Bastiaanssen, Karel Martens, and Gert Jan Polhuijs conclude in their 2013 case study of low-income jobseekers in the

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2   Nationaal Archief, Archive no. 2.15.62, Directoraat-Generaal voor de Arbeidsvoorziening van het Ministerie van Sociale Zaken en Werkgelegenheid, 1970-1990, Inventory no. 2199, "Handleiding Passende Arbeid" (1977), C.R.v.B., 27 March 1975, R.S.V. 1975 no. 341; "Fietsen naar het werk," *Het Parool*, 1 October 1975, 23.

3   Susan Kenyon, Glenn Lyons, and Jack Rafferty, "Transport and Social Exclusion: Investigating the Possibility of Inclusion through Virtual Mobility," *Journal of Transport Geography* 10, no. 3 (2003): 207-219; Karen Lucas, "Transport and Social Exclusion: Where Are We Now?," *Transport Policy* 20 (2012): 105-113.

Netherlands' second largest city, Rotterdam, that being "without a driving license, without a bicycle, without public transit access" means "no job."[4] They have put the issue on the political agenda as a public responsibility: the state should get involved. Scholars have identified national and local government as key to breaking this vicious circle: ensuring mobility systems work for vulnerable social groups through regulations, safe roads, bicycle paths, and public transit subsidies.[5] While scholars routinely call for the state to play its part, they have so far overlooked the historical, but changing role of employers.

Employers are important actors in facilitating and shaping workers' everyday mobility. They lobby for infrastructures like public transit, roads, and bicycle paths for their workers. Perhaps surprisingly, in interwar America, Detroit Ford Motor Company supported a rapid-transit system to enable nearly a hundred thousand workers to access its sprawling River Rouge plant—and, as American scholars have detailed, shortly after the Second World War, switched to facilitating automobility and expressways so that workers could reach faraway industrial sites.[6] Employers also provided employees travel allowances per kilometer, individual travel budgets, lease plans for cars, and fiscal benefits when purchasing a bicycle.[7] Company bus transportation represents another, more direct intervention in lowering mobility barriers for car-less workers in remote (gateway) locations like ports and business parks near highways. Especially larger companies with sufficient financial means and political leverage can enhance job accessibility.[8]

4   Jeroen Bastiaanssen, Karel Martens, and Gert-Jan Polhuijs, "'Geen rijbewijs, geen fiets, geen ov-aansluiting, geen baan': Vervoersarmoede in Rotterdam-Zuid," *Verkeerskunde* 5 (2013): 44-50.

5   Jeroen Bastiaanssen, Daniel Johnson, and Karen Lucas, "Does Transport Help People to Gain Employment? A Systemic Review and Meta-Analysis of the Emperical Evidence," *Transport Reviews* 40, no. 5 (2020): 607-628.

6   In the Netherlands, Berkers and Oldenziel (2017) note that Dutch synthetic fiber industry AKU lobbied for bicycle paths to cater to the masses of cycling commuters to their Arnhem sites. Eric Berkers and Ruth Oldenziel, *Cycling Cities: The Arnhem and Nijmegen Experience* (Eindhoven: Foundation for the History of Technology, 2017), 26; Charles Hyde, "Planning a Transportation System for Metropolitan Detroit in the Age of the Automobile: The Triumph of the Expressway," *Michigan Historical Review* 32, no. 1 (2006): 59-95.

7   Verkeersonderneming, "Werkgeversaanpak," https://www.verkeersonderneming.nl/r10/, accessed May 7, 2021; Ministerie van Infrastructuur en Waterstaat, "Werkgevers stimuleren fietsgebruik medewerkers," Rijksoverheid, https://www.rijksoverheid.nl/onderwerpen/fiets/ werkgevers-stimuleren-fietsgebruik-medewerkers, accessed June 18, 2021.

8   Verkeersonderneming, "Werkgeversaanpak"; Thomas Vanoutrive, "Commuting, Spatial Mismatch, and Transport Demand Management: The Case of Gateways," *Case Studies on Transport Policy* 7, no. 2 (2019): 489-496.

Business involvement in workers' mobility also comes with risks. According to the 2020 Dutch government report, *No Second-Class Citizens* (*Geen Tweederangsburgers*), powerful employers and employment agencies provide not just work for thousands of immigrants in agricultural, meat, and distribution industries, but also housing, health insurance, and transport. Several employers house migrant workers in cheap accommodation—for example vacant holiday parks far from work locations—and transport them by shuttle bus to worksites. They deduct substantial travel costs from workers' wages without providing compensation for long travel times or allowing workers the opportunity to live closer by, opt for mobility alternatives, and report exploitation. Employers are thus potentially key actors in reducing mobility barriers for workers when labor is scarce—though these cases also signal the mobility injustices that might arise when profits and control over workers rather than their well-being and social justice are guiding principles.[9] In other words, employers' involvement in facilitating workers' mobility to find and keep a job is precarious.

The reality stands in contrast to today's mobility discourse and practice. Upper and middle-class people tend to be highly mobile. Yet, low-income workers and jobseekers commute shorter distances because of what scholars call "limited travel horizons", experience severe cost and availability barriers, and rely more often on slower modes of transport.[10] They are forced to use failing public transit services—poorly connected to job locations and adjusted to working hours. They often must endure longer travel times and (socially) unsafe mobility. And they cannot access jobs in car-only areas or are forced to purchase a car, further straining already tight household budgets. Not just in car-oriented America. Case studies across the globe indicate this is a universal problem with local variations of mobility systems and power relations.[11] Even in the Netherlands, internationally renowned

9   Emile Roemer, *Geen Tweederangsburgers: Aanbevelingen om misstanden bij arbeidsmigranten in Nederland tegen te gaan* (The Hague: Aanjaagteam Bescherming Arbeidsmigranten, Rijksoverheid, 2020), 13-14, 20, 67.

10   Morris observes that low-income persons tend to have more limited travel horizons compared to middle- and upper-class people, largely as the result of being without a car or other options. Middle-class car drivers have a wider action radius and consequently more opportunity to land better paid jobs further afield. Kate Morris, "Research into travel horizons and its subsequent influence on accessibility planning and demand responsive transport strategies in Greater Manchester," paper presented at the *European Transport Conference*, Strasbourg, France (2006).

11   Bastiaanssen, Johnson, and Lucas, "Does Transport Help?," 607-628; Hans Jeekel and Karel Martens, "Equity in Transport: Learning from the Policy Domains of Housing, Health Care and Education," *European Transport Research Review* 9, no. 4 (2017): 1-13; Tobias Kuttler and Massimo Moraglio, *Re-Thinking Mobility Poverty: Understanding Users' Geographies, Backgrounds and Aptitudes* (London/New York: Routledge, 2020); Karen Lucas, "The Role of Transport in the Social

for its strongly embedded bicycle and car regime, plus well-developed albeit expensive public transit, precarious mobility is a daily reality for many.[12]

These predicaments are not new, even though some scholars suggest otherwise. According to Tobias Kuttler and Massimo Moraglio, the theme of transport-related social exclusion first appeared in academic debates through geographer Karen Lucas around 2004.[13] For the Netherlands, Karel Martens, Marnix ten Holder, and Jurriën Thijssen presented their work in 2011 as one of the first to address the problem in Dutch academic circles and policy debates.[14] These claims illustrate the systemic lack of historical awareness. The phenomenon has a much longer tradition. Sociologist Colin Pooley signaled a widening inequality gap in British people's accessibility around 1970, when car-centered transport and land-use planning raised mobility barriers for people without a car.[15] As I will show—something that no scholar has yet addressed—similar issues were also raised in the Netherlands half a century ago.

Indeed, today's predicaments are not the sole effect of recent political decisions. They have a history. Mobility systems have long lifespans—and reflect decisions made in the past. In the words of Frank Schipper, Martin Emanuel, and Ruth Oldenziel, "it takes decades to build—and by the same token to unbuild—systems that include infrastructures (from bridges to airports), as well as the institutions (from semi-governmental transport agencies to powerful lobbies) sustaining them." Transforming mobility systems entails

Exclusion of Low Income Populations in South Africa," paper presented at the *World Conference on Transport Research Society*, Lisbon, Portugal, July 11-15, 2010, https://www.wctrs-society.com/wp-content/uploads/abstracts/lisbon/general/01390.pdf, 1-21, accessed October 31, 2021; Deborah Salon and Sumila Gulyani, "Mobility, Poverty, and Gender: Travel 'Choices' of Slum Residents in Nairobi, Kenya," *Transport Reviews* 30, no. 5 (2010): 641-657; Thomas Vanoutrive, "Minder inkomen, dus minder mobiel, dus minder kansen," *Armoede en Sociale Uitsluiting: Jaarboek 2018*, edited by Jill Coene et al. (Leuven/The Hague: Acco, 2018), 277-290; Dominic Villeneuve and Vincent Kaufmann, "Exploring the Causes of Social Exclusion Related to Mobility for Non-Motorized Households," *Transportation Research Board* 2674, no. 8 (2020): 911-920.

12   Bastiaanssen, Martens, and Polhuijs, "'Geen rijbewijs, geen fiets, geen ov-aansluiting, geen baan'", 44-50; Rob van der Bijl and Hugo van der Steenhoven, *Gesprekken over gebrekkige mobiliteit: Vervoersarmoede in de grote stad ontrafelen* (Amsterdam/Utrecht: Favas/HugoCycling, 2019), 7-8, 12-16; Peter Jorritsma et al., *Mobiliteitsarmoede: Vaag begrip of concreet probleem?* (The Hague: Kennisinstituut voor Mobiliteitsbeleid, 2018), 27-28.

13   Kuttler and Moraglio, *Re-Thinking Mobility Poverty*, 6-7; Karen Lucas, *Running On Empty: Transport, Social Exclusion and Environmental Justice* (Bristol: The Policy Press, 2004).

14   Karel Martens, Marnix ten Holder, and Jurriën Thijssen, "Vervoersarmoede Bestaat," *Verkeerskunde* 2, no. 11 (2011): 34-38.

15   Colin Pooley, "Mobility, Transport and Social Inclusion: Lessons from History," *Social Inclusion* 4, no. 3 (2016): 100-109.

understanding the long-term development paths and "supporting coalitions of vested interests built around them over decades."[16] Today's academic and policy debates on mobility poverty often ignore this historical perspective. Adopting a long-term approach is key to helping decisionmakers analyze causes, identify alternative mobility futures, and discern the power relations that drive historical trends. Without such a perspective, academic and policy debates run the risk of being short-terminist, piecemeal, and eventually having limited or even adverse effects.[17] In taking up this call, *No Bicycle, No Bus, No Job* reveals that workers' (im)mobility has been the outcome of social processes driven by workers, employers, and the government.

How Workers' Travel was Controlled in Many Ways

Labor historians have a long tradition of analyzing power and agency in the context of working-class life, labor relations, and the organization of work. They have shown how freedom and unfreedom, autonomy and heteronomy, are often different sides of the same coin. In his seminal work *The Making of the English Working Class* (1963), labor historian E.P. Thompson criticized the reductionist tendency to describe the working class as an amorphous unchangeable entity or uneducated mass that acted on impulse and emotion. Such writing obscured workers' experiences, aspirations, moral convictions, and ingenuity. Workers were not merely the victims of capitalist history. "The working class made itself as much as it was made" through solidarity, collectivism, and political action, Thompson famously wrote.[18] Building on his work, scholars have shown how important unions have been in representing skilled and unskilled workers to leverage power collectively and create agency in shaping their lives. Synthesizing many international studies, Marcel van der Linden explains unions came in many shapes, but essentially enabled collective bargaining over employees' rights, wages, and working conditions with strikes as ultimate political levers.[19]

16   Frank Schipper, Martin Emanuel, and Ruth Oldenziel, "Introduction: Historicizing Sustainable Urban Mobility," in *A U-Turn to the Future: Sustainable Urban Mobility since 1850*, edited by Martin Emanuel, Frank Schipper, and Ruth Oldenziel (New York: Berghahn Books, 2020): 1-26, here 3-4.
17   Peter Norton, "Urban Transport and Mobility in *Technology and Culture*," *Technology and Culture* 61, no. 4 (2020): 1197-1211, here 1205; Erik van der Vleuten, "History and Technology in an Age of 'Grand Challenges': Raising Questions," *Technology and Culture* 61, no. 1 (2020): 260-271.
18   Edward Palmer Thomspon, *The Making of the English Working Class* (London: Penguin, 2013 [1963]), 213.
19   Marcel van der Linden, *Workers of the World: Essays Toward a Global Labor History* (Leiden/Boston: Brill, 2011), 219, 225

While recognizing workers' agency, labor historians also pointed out its limits, starting with Thompson who explained how since the Industrial Revolution, state and factory managers imposed synchronic forms of time and work discipline on working people, curtailing their freedom of choice.[20] The struggle over employers' control and workers' agency has been a key theme in labor history. Other critical thinkers have also brought under scrutiny the limits of individual freedom in modern capitalist society. In a society organized around mentalities of efficiency, rationality, and social control, to what extent could people still autonomously decide the direction of their own lives?[21] While my work brings to the fore workers' agency, it also shows that changing and often uneven power relations profoundly shaped their ability to decide whether and how to travel.

For theorizing how different modes of power operate in modern and liberal societies, French philosopher and historian Michel Foucault has been highly influential. Foucault argued that modern forms of power—what he referred to as "governmentality"—seek "to incite, reinforce, control, monitor, optimize, and organize the forces under it." Governmentality involves "a power bent on generating forces, making them grow, and ordering them, rather than one dedicated to impeding them, making them submit, or destroying them."[22] During the Industrial Revolution, new modes of power emerged, not just for organizing work and capital. They centered on "the body as a machine, optimizing its capabilities, increasing its usefulness and docility, integrating it into systems of efficient and economic controls."[23] It enabled those in power—like factory managers—to meticulously control the physical movements of their workers (whom he called "bodies") and impose on them what Foucault defined as a "relationship of docility-utility." This control was exercised through the physical arrangement of built environments, work schedules, and the manipulation of machines and factories.[24]

Foucault's work has greatly influenced historical analyses of power. Foucault helps to conceptualize how state and company power operates, and how power

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20   Edward Palmer Thompson, "Time, Work-Discipline, and Industrial Capitalism," *Past & Present*, no. 38 (1967): 56-97.

21   See among other works: Ivan Illich, *Deschooling Society* (San Francisco: Harper & Row, 1971), xix-xx; *Tools for Conviviality* (San Francisco: Harper & Row, 1973), 50-53; Herbert Marcuse, *One-Dimensional Man* (London/ New York: Routledge, 2002 [1964]), 3-20; Max Weber, *Economy and Society: An Outline of Interpretive Sociology* (Berkeley: University of California Press, 1978), lix.

22   Michel Foucault, *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977* (New York: Pantheon Books, 1980), 136, 139, 141-142, 144.

23   Michel Foucault, *History of Sexuality*, vol. 1 (London: Penguin Books, 1978), 139, 144.

24   Michel Foucault, *Discipline and Punish: The Birth of the Prison* (London: Penguin/Random House, 2020 [1977]), 136-138.

relations between workers shift. A common criticism of his work, however, is that he regarded bottom-up attempts to resist dominant power structures pointless and nullified individual agency. Even in cases where individuals could be regarded as self-governing, Foucault deemed their actions to be curtailed by power relations and disciplinary mechanisms.[25] I explore this tension in the context of workers' mobility, tracing who controlled the everyday commute. Thus, we should not see the workers on these pages as docile subjects at the mercy of a dominant state or factory manager. Workers often acted as autonomous, self-governing agents too. They did so in a changing playing field of power relations that shifted from paternalism to neo-liberalism.

Labor historians have meticulously researched how such control over workers came about. They have unraveled industrial-capitalist politics of control over workers in terms of time, space, and movement. In *Handbook Global History of Work*, Karin Hofmeester and Marcel van der Linden synthesize an extensive body of scholarship to explain that modern labor management started back in the mid-eighteenth century with the development of industrial capitalism. Factory owners and later managers, eager to accumulate surplus value, reduced labor costs by imposing time-discipline, training, and scientific management.[26] Machines and factory floors were designed in such a way that managers could detect loitering workers and reduce any unnecessary actions that might hamper the workflow.[27] Applying formal and informal rules, employers stipulated when, where, and how labor had to be performed, by whom, and for what reward (or penalty). Later, this ideology of efficiency spread from the United States to Europe and beyond through magazines, books, trade shows, and consultancy firms.[28] These studies focus on what on what happened on work sites.

25   Kurt Borg, "Conducting Critique: Reconsidering Foucault's Engagement with the Question of the Subject," *Symposia Melitensia*, no. 11 (2015): 1-15, here 1-2, 14.

26   Marcel van der Linden, "Work Incentives and Forms of Supervision," in *Handbook Global History of Work*, ed. Karin Hofmeester and Marcel van der Linden (Berlin/Boston: De Gruyter Oldenourg, 2018), 469-470, 479-481.

27   Andrew Herod, "Social Engineering through Spatial Engineering: Company Towns and the Geographical Imagination," in *Company Towns in the Americas: Landscape, Power, and Working-Class Communities*, ed. Oliver Dinius and Angela Vergara (Athens, GA: University of Georgia Press, 2011), 30; Arwen Mohun, "Labor and Technology," in *A Companion to American Technology* ed. Carroll Pursell (Malden, MA: Blackwell, 2008), 214-215, 219-221; Erik van Vleuten, Ruth Oldenziel, and Mila Davids, *Engineering the Future, Understanding the Past: A Social History of Technology* (Amsterdam: Amsterdam University Press, 2017), 77; Frans van Waarden, "Organisatie, arbeid en ondernemersbeleid in de twentse katoenindustrie," in *Ter Elfder Ure* 33, edited by Hugues Boekraad et al. (Nijmegen: SUN, 1983), 157-200, here 158, 170-180.

28   Linden, "Work Incentives and Forms of Supervision," 469-470, 479-481; Vleuten, Oldenziel, and Davids, *Engineering the Future*, 77-78; Waarden, "Organisatie, arbeid en ondernemersbeleid

I show how managers also interfered with what assembly-line workers, dockers, miners, steel workers, and textile workers did outside the factory gates. Historians have traced how following American Fordism, industrialists worldwide believed that investments in workers' quality of life would increase well-being and productivity, thus reduce labor turnover and conflict in the form of week-long strikes. Historian Howard M. Gitelman notes that under the guise of "industrial welfare" (or "welfare capitalism"), managers attempted to make workers' bodies more productive by providing proper nutrition, housing, and medical care. In contrast to the more discretionary, nineteenth-century paternalism found in family-owned firms, newly established social affairs departments organized this form of paternalism and labor control more systematically.[29] Dutch historians have detailed these trends as well: electronics company Philips and steelworks company Hoogovens established their social services in the interwar years. Amid the postwar push for industrial growth, welfare programs found wider application. Company-owned guesthouses, neighborhoods, and towns were common practice across the industrializing world. For the Netherlands too, such initiatives symbolized companies' well-intended industrial paternalism. Driven by global economic forces and profit, these also symbolized their control over workers' lives.[30] Labor history has detailed these trends in industrial capitalism throughout the world. Still, company housing was an important form of control outside the factory gates, but limited in terms of numbers.

That is not the case for workers' mobility.[31] Scholars have ignored this aspect of workers' life as well as the forces that shaped that experience. A

in de twentse katoenindustrie," 158, 170-180.

29   Howard M. Gitelman, "Welfare Capitalism Reconsidered," *Labor History* 33, no. 1 (1992): 5-31.

30   Bram Bouwens et al., *Door staal gedreven: Van Hoogovens tot Tata Steel, 1918-2018* (Bussum: Uitgeverij Thoth, 2018), 45-47; Gerard Kuijs, *De vrees voor wat niet kwam: Nieuwe arbeidsverhoudingen in Nederland 1935-1945, aan het voorbeeld van de Twentse textielindustrie* (Amsterdam: Vossiuspers UvA, 2010), 176-179; Charles S. Maier, "Between Taylorism and Technocracy: European Ideologies and the Vision of Industrial Productivity in the 1920s," *Journal of Contemporary History* 5, no. 2 (1970): 27-61; Frank Pot, *Zeggenschap over beloningssystemen 1850-1987* (Leiden: NIPG/TNO, 1988), 172; Sjef Stoop, *De sociale fabriek: Sociale politiek bij Philips Eindhoven, Bayer Leverkusen en Hoogovens IJmuiden* (Utrecht: Stenfert Kroese, 1992), 21-22, 29-33, 44-46; Vleuten, Oldenziel, and Davids, *Engineering the Future*, 77-79; Jaap Vogel, *Nabije vreemden: Een eeuw wonen en samenleven*, Cultuur en Migratie in Nederland (The Hague: SDU Uitgevers, 2005).

31   Since the early 2000s, a mobilities turn in transport history widened research topics and approaches, shifting away from roads, vehicles, physical infrastructures, to people and things moving between places, sensitive to underlying politics, social meanings, and practices. Simone Fari and Massimo Moraglio, "Future Mobilities: A Challenge for Economic and Business Historians," in *43rd Annual Economic and Business History Society Conference* (University of Jyväskylä2018), 2, 7-8, 14; Gijs Mom, "What Kind of Transport History Did We Get? Half a Century

literature review of *Labor History* and *The International Review for Social History*—both leading journals in labor history—shows how daily commuting became a more common job market strategy for blue-collar workers since the late nineteenth century. These studies, however, do not detail how people travelled to work. Nor do they address the underlying power issues that shaped workers' mobility.[32] This omission is remarkable because, unlike company housing, controlling how employees got to work involved a larger portion of the workforce. Examining the phenomenon extends our understanding of how workers are governed.

Numerous specialists in mobility history have addressed workers' daily journeys as a phenomenon without going into detail or mention workers' experience only in passing. These mobility history studies imply workers—though not their research focus—had agency in choosing how they commuted. In late-nineteenth and early twentieth-century Europe, most people walked to work because their workplace was usually near where they lived. In Enschede—the epicenter of the Dutch textile industry—for instance, workers from the newly built working-class neighborhoods walked to work.[33] For longer distances, some commuted by tram and train. Colin

of JTH and the Future of the Field," *The Journal of Transport History* 24, no. 2 (2003): 121-138, here 122-123, 126, 128, 130-132; Mom, Divall, and Lyth, "Towards a Paradigm," 14, 17, 19, 21-23; Norton, "Urban Transport and Mobility in *Technology and Culture*," 1201, 1204.

32   *Labor History* and *The International Review for Social History*: Robert Baker, "Socialism in the Nord, 1880–1914. A Regional View of the French Socialist Movement," *The International Review of Social History* 12, no. 3 (1967): 357-389; Jan Breman, "Industrial Labour in Post-Colonial India II: Employment in the Informal-Sectory Economy," *The International Review of Social History* 44, no. 3 (1999): 451-483; Simon Constantine, "Migrant Labour in the German Countryside: Agency and Protest, 1890–1923," *Labor History* 47, no. 3 (2006): 319-341; Martin Daunton, "Miners Houses: South Wales and the Great Nortern Coalfield, 1880-1914," *The International Review of Social History* 25, no. 2 (1980): 143-175; Elena Dinubila, "Fight for Meaning: Representations and Work Experiences in a Greenfield Automotive Plant," *Labor History* 61, no. 1 (2020): 60-73; Alf Lüdtke and William Templer, "Polymorphous Synchrony: German Industrial Workers and the Politics of Everyday Life," *The International Review of Social History* 38, Supplement 1 (1993): 39-84; Ian Kerr, "On the Move: Circulating Labor in Pre-Colonial, Colonial, and Post-Colonial India," *The International Review of Social History* 51, Supplement 14 (2006): 85-109; Can Nacar, "'Our Lives Were Not as Valuable as an Animal': Workers in State-Run Industries in World-War-II Turkey," *The International Review of Social History* 54, Supplement (2009): 143-166; Dhiraj Nite, "Employee Benefits, Migration and Social Struggles: An Indian Coalfield, 1895-1970," *Labor History* 60, no. 4 (2019): 372-391; Randall Patton, "Textile Organizing in a Sunbelt South Community: Northwest Georgia's Carpet Industry in the Early 1960s," *Labor History* 39, no. 3 (1998): 291-309; Peter Scott, "Women, Other 'Fresh Workers', and the New Manufacturing Workforce of Interwar Britain," *The International Review of Social History* 45, no. 3 (2000): 449-474.

33   Adri Albert de la Bruhèze, "Enschede: An Experiment in Cycling," in *Cycling Cities: The European Experience*, edited by Ruth Oldenziel et al. (Eindhoven: Foundation for the History of Technology, 2016), 41-51, here 41.

Pooley and Jean Turnbull signaled major transformations in commuting patterns in twentieth century Britain, which appear broadly consistent across Europe.[34] Since the interwar period, three major shifts occurred in workers' mobility. First, workers discovered bicycles in the interwar period. Historians Adri Albert de la Bruhèze and Frank Veraart show in *Fietsverkeer in praktijk en beleid in de twintigste eeuw* (1999) that across interwar Europe, cycling was booming among the working-classes. Later *Cycling Cities: The European Experience* (2016), edited by Ruth Oldenziel, Martin Emanuel, Adri Albert de la Bruhèze, and Frank Veraart expanded on this insight.[35] Second, workers found affordable alternatives to fixed-route rail transport in paratransit taxi and bus services. In early twentieth century France, manual workers could commute via collective taxis for two francs, a fifth of first-class rail fares. In the Netherlands, similar bus services mushroomed, as Gijs Mom and Ruud Filarski show in *Van Transport naar Mobiliteit,* though they do not highlight their significance for working-class commuters.[36] Third, in the second half of the twentieth century, a growing number of working-class households purchased mopeds and cars. Car ownership took off later in the Netherlands compared to neighboring Belgium, Britain, and Germany, before catching up fast, spurred by the postwar economic boom and the government's liberalization of wages in 1963. According to historians Gijs Mom, Johan Schot, and Peter-Eloy Staal, by 1970, cars had also become a more common option for commuting in the Netherlands.[37] Matters of agency and power remain largely unaddressed in the mobility scholarship.

34   Colin Pooley and Jean Turnbull, "The Journey to Work: A Century of Change," *Area* 31, no. 3 (1999): 281-292; "Modal Choice and Modal Change: The Journey to Work in Britain Since 1890," *Journal of Transport Geography* 8, no. 1 (2000): 11-24.

35   Adri Albert de la Bruhèze and Frank Veraart, *Fietsverkeer in praktijk en beleid in de twintigste eeuw* (The Hague: Foundation for the History of Technology, 1999); Ruth Oldenziel et al., *Cycling Cities: The European Experience* (Eindhoven: Foundation for the History of Technology, 2016).

36   Ruud Filarski, "De coördinatiecrisis," in *Van transport naar mobiliteit: De mobiliteitsexplosie (1895-2005)*, ed. Gijs Mom and Ruud Filarski (Zutphen: Walburgpers, 2008), 203-235; Mathieu Flonneau, "Collective Taxis in 1930s Paris: A Contribution to an Archeology of 'Uberization,'" *The Journal of Transport History* 39, no. 1 (2018): 12-24; Gijs Mom, "Clashes of Cultures: Road vs. Rail in the North Atlantic World during the Interwar Coordination Crisis," in *The Organization of Transport: A History of Users, Industry, and Public History*, ed. Massimo Moraglio and Christopher Kopper (New York: Routledge, 2015), 18-37.

37   Doreen Ewalds, Ger Moritz, and Michel Sijstermans, *Bromfietsen in Nederland* (The Hague/ Heerlen: Centraal Bureau voor Statistiek, 2013), 4; Gijs Mom, Johan Schot, and Peter-Eloy Staal, "Werken aan mobiliteit: de inburgering van de auto," in *Techniek in Nederland in de twintigste eeuw: Transport, communicatie*, edited by Harry Lintsen and Johan Schot (Zutphen: Walburgpers, 2002): 45-73, here 70; Peter-Eloy Staal, *Automobilisme in Nederland: Een geschiedenis van gebruik, misbruik en nut* (Zutphen: Walburgpers, 2003), 118.

Less well described is how mobility is produced, under what conditions, and who has a say in decision-making. This also affects whether and how workers get to work. In *Mobility Justice*, sociologist and historian Mimi Sheller argues that whether, when, and how people move are political and moral questions. Mobility is never politically neutral, but "full of frictions, viscosity, stoppages, and power relations. ... always contingent, contested, and performative. ... never free but ... in various ways always channeled, tracked, controlled, governed, under surveillance and unequal—striated by gender, race, ethnicity, class, caste, color, nationality, age, sexuality, disability, etc., which are all in fact experienced as effects of uneven mobilities."[38] A mobility justice perspective not only focuses on the actual movement from A to B and how available mobility options are distributed over society. It also involves understanding how power relations and systems of governance enable or prohibit movement.

Commuting—the ability to get to work in the first place—is thus not a simple matter of choosing whether, how and when to travel. Power and privilege are what determine one's field of action. Compared to privileged highly mobile people, low-income workers and jobseekers have fewer mobility options. This is not only down to greater physical distances from jobs or physical abilities to travel, but also levels of network capital, according to mobility scholars John Urry and Mimi Sheller. Marginalized people's capacity to engender and maintain access to financial capital and social networks for economic and practical benefit is generally more limited. Typically, they cannot choose freely between a wide range of affordable mobility alternatives, nor do they have a say in political decisions that affect how they get around. Consequently, this reduces their ability to overcome mobility barriers and curtails their autonomy to decide how and when to travel.[39]

A few mobility historians have detailed how the state played a key role in shaping the preconditions that enabled workers to commute. Social reform concerns about workers' living conditions were an important incentive for developing rail transportation in the late 1800s. As more unskilled workers gained employment in urban docks, factories, and construction sites, government and employers' concerns about hygiene, impoverishment, and proletarization fueled the planning of new working-class housing

38   Mimi Sheller, *Mobility Justice: The Politics of Movement in an Age of Extremes* (London/New York: Verso, 2018), XV, 10-11.
39   Tobias Kuttler and Massimo Moraglio, *Re-Thinking Mobility Poverty: Understanding Users' Geographies, Backgrounds and Aptitudes* (London/New York: Routledge, 2020), 10; Mimi Sheller, "Theorising Mobility Justice," *Tempo Social* 30, no. 2 (2018): 26; *Mobility Justice*, 159-160; John Urry, *Mobilities* (Cambridge/Malden: Polity, 2007), 197.

outside urban centers (garden cities). As travel distances between home and work increased across Western Europe, the demand for rail connections rose, mobility historians Colin Divall and Winstan Bond detail in *Suburbanizing the Masses*.[40] According to Bond, paternalistic ideas about improved working-class well-being and housing "away from the smoke, disease and congestion," went hand in hand with early twentieth century state-subsidized rail expansion connecting working-class neighborhoods with industrial sites.[41] Special workmen fares also enabled workers from far and wide to access industrial jobs across Western Europe.[42] Greet De Block argues that in Flanders, these developments effectuated "the 'emancipation of the working class' in an economically liberal meaning, providing material equality to laborers that were isolated in rural areas without being able to go out according to their interests and needs."[43] This also applied to the Netherlands. Even though rail-based travel, like elsewhere, declined sharply in later decades, the Dutch government financially supported its railways, maintaining a basic infrastructure.[44]

Road and bicycle path construction was another government task, as mobility historians show. In the Netherlands, like in other European countries, road construction took off in the interwar period. Politicians, policymakers, and engineers governed this process. Initially, national

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40   Elisabeth Bervoets, "Modernisering van de woningbouw 1890-1970: een bijzonder patroon van technische vernieuwing," in *Techniek in Nederland in de twintigste eeuw. Deel 6. Stad, bouw, industriële productie*, ed. Johan Schot, et al. (Eindhoven/Zutphen: Foundation for the History of Technology /Walburgpers, 2003): 110-117, here 119; Hans Buiter, "Werken aan sanitaire en bereikbare steden, 1880-1914," in *Techniek in Nederland in de twintigste eeuw. Deel 6: Stad, bouw, industriële productie*, ed. Johan Schot, et al. (Eindhoven/Zutphen: Foundation for the History of Technology /Walburgpers, 2003): 25-49, here 41; Colin Divall and Barbara Schmucki, "Introduction," in *Suburbanizing the Masses: Public Transport and Urban Development in Historical Perspective* ed. Colin Divall and Winstan Bond (London/New York: Routledge, 2003), 10-11.
41   Winstan Bond, "The Flawed Economics and Morality of the American Uniform Five-cent Fare," in *Suburbanizing the Masses*: 49-78, here 65.
42   Paolo Capuzzo, "Transport and (sub)urban development: Between politics and technology: transport as a factor of mass suburbanization in Europe, 1890-1939," in *Suburbanizing the* Masses: 23-48, here 25-27, 30-31, 35; Tomas Ekman, "Vision in Solid Form: A Comparison Between Two Solutions to the Traffic Probelm in Stockholm, 1941 and 1992," in *Suburbanizing the Masses*, 181; Dieter Schott, "Suburbanizing the Masses for Profit or Welfare: Conflict and Cooperation Between Private and Municipal Interests in German Cities, 1890-1914," in *Suburbanizing the Masses*, 79-80.
43   Greet De Block, "Urbanizing the Countryside: Rails, Workers and Commuting in South-West Flanders, Belgium, 1830-1930," in *Cultural Histories of Sociabilities, Spaces and Mobilities*, ed. Colin Divall (London: Routledge, 2015): 53-66, here 53-55, 58.
44   Gijs Mom and Ruud Filarski, *Van Transport naar Mobiliteit: De Mobiliteitsexplosie 1895-2005* (Zutphen: Walburgpers, 2008), 390-393.

funding was allocated for constructing interlocal highways and Dutch city planners and policymakers increasingly redeveloped streets for projected car drivers, even though pedestrians and cyclists were still the major road users. This process accelerated in the postwar decades, encouraged by U.S. Marshall Aid and the technocratic ambitions of car-centered modernity. Historian Henk-Jan Dekker shows in *Cycling Pathways* that bicycle path construction also took off in interwar Netherlands. Building on the work of Veraart, Albert de la Bruhèze, and Oldenziel et al., Dekker shows that Dutch decision-makers envisioned bicycle paths would help get cyclists out of the way of car drivers, but also supported commuter cycling. In the postwar decades, until the bicycle revival in the 1970s, bicycle path construction was pushed to the sidelines in car-centered transportation and land-use planning. Still, it remained an important provincial and city government task.[45] Roads and bicycle paths formed the basic infrastructures that potentially enabled workers' movements, funded and planned by the state. Scholars have focused less on whether workers could and did actually use such infrastructures, though historians provide ample evidence that engineers and local authorities took these issues seriously.

A few mobility scholars show that, unlike its commitment to enhance workers' mobility by rail and road, the government sought to control workers' movements on foot, bicycle, and bus—popular among the working-classes. Bicycles and buses were subjected to intensive regulations by local authorities and the national government. These efforts aimed to control rather than enhance mobility. The severe interventions reveal how state authorities curtailed certain movements in the name of social order, modernity, and fair competition. When automobility emerged, car boosters and their allies restricted walking and cycling practices through direct control, regulation, and traffic educational campaigns. Liability for traffic accidents increasingly shifted from car drivers to pedestrians and cyclists' allegedly unruly bodies and undisciplined minds. Working-class cyclists were policed and schooled until they fitted this powerful and normative discourse. In many instances they were excluded from using certain spaces, historians Oldenziel and Albert de la Bruhèze claim in "Contested Spaces: Bicycle Lanes in Urban

45   Henk-Jan Dekker, *Cycling Pathways: The Politics and Governance of Dutch Cycling Infrastructure, 1920-2020* (Amsterdam: AUP, 2021), 84-85, 106, 118-119, 205-207; Gijs Mom, "Roads Without Rails: European Highway Network-Building and the Desire for Long-Range Motorized Mobility," *Technology and Culture* 46, no. 4 (2005): 745-772, here 747; Mom and Filarski, *Van Transport naar Mobiliteit (II)*, 200-201, 311-325.

Europe."[46] Similarly, paratransit bus operators were subjected to intensifying
state regulation, motivated by the state's vested interests in rail transport.
Mom argues these interventions were rooted in the interwar desire for
order, fueled by middle-class fears of political revolution and European
decision-makers seeking "harmony and spatial balance" Technocratic
policymakers and transport economists envisioned that they could "win
the wilderness over to order," in this case by prohibiting bus operators from
freely adjusting fares, timetables, and routing—the very aspects that made
bus transport popular with the public. Such attempts to govern mobility
practices ultimately created a web of control over people's movements,
according to Mom.[47]

Thus far, historians have not focused on the employers' role, highlighting
that governments were the key agents in mobility development as part of
a systematic state planning effort. Mom and Filarski point out that road
construction was a negotiated process, guided by the interests of various
non-state actors like tourist organization ANWB and road-building associa-
tions. Dekker details that the initiators in bicycle path construction were
cycling citizens and the ANWB.[48] In both labor and mobility histories, the
role of workers and employers, however, remains underexposed.

Mobility historians sporadically mention employers' lobbying efforts in
railway, road, and bicycle path construction.[49] For the postwar era, labor and
business historians only note in passing company interventions in mobilizing
cheap rural labor. Erik Nijhof notes that in the decades following the Second
World War, company-organized buses were essential for Rotterdam's port
companies to attract cheap labor from rural regions.[50] Jan Zwemer's postwar
history on the province of Zeeland confirms that buses enabled jobseekers
in more remote areas to escape rural poverty by getting access to distant,
better paid industrial jobs.[51] Serge Langeweg makes a similar observation for

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46   Jennifer Bonham and Peter Cox, "The Disruptive Traveller? A Foucauldian Analysis of
Cycleways," *Road and Transport Research* 19, no. 2 (2010): 42-53, here 15, 18-19; Ruth Oldenziel
and Adri Albert de la Bruhèze, "Contested Spaces: Bicycle Lanes in Urban Europe, 1900-1995,"
Transfers 1, no. 2 (2011): 29-49.

47   Mom, "Clashes of Cultures," 18-21, 28.

48   Dekker, *Cycling Pathways*, 171-180; Mom and Filarski, *Van Transport naar Mobiliteit* (*II*), 390-393.

49   Berkers and Oldenziel, *Cycling Cities*, 26; Dekker, *Cycling Pathways*, 84-85, 106, 118-119,
205-207; Hyde, "Planning a Transportation System for Metropolitan Detroit in the Age of the
Automobile," 59-95; Mom and Filarski, *Van Transport naar Mobiliteit* (*II*), 200-201, 311-325.

50   Erik Nijhof, '*Gezien de dreigende onrust in de haven': De ontwikkeling van de arbeidsver-
houdingen in de Rotterdamse haven 1945-1965* (Amsterdam: IISG, 1988), 138-142.

51   Jan Zwemer, "De pendelarbeiders van Tholen en Sint-Philipsland," in *Zeeland 1950-1965*, ed.
Jan Zwemer (Vlissingen: Uitgever Den Boer/De Ruiter, 2005): 401-428.

the Southeast Limburg mining region, in *Mijnbouw en Arbeidsmarkt*.[52] Bram Bouwens' business history of Dutch steel company Hoogovens mentions that instead of housing employees near blast furnace sites in IJmuiden, the postwar period marked a shift to mobilizing workers from the wider region by bus.[53] Despite such observations, these historical works do not delve deeper into the company governance of workers' commute. Moreover, they reduce workers to mere bus passengers, instead of seeing them as shaping agents who faced dilemma's in selecting mobility options in the first place to get to work.

Industrial capitalism could not have thrived without the appropriate social and material preconditions that enabled the accumulation of surplus value. Government and employers' ability to configure these preconditions has been an essential factor in making the production system work.[54] Company control over workers' movements played a central role in this endeavor. This not only applied to the shopfloor and company housing. It also shaped how workers commuted until deindustrialization, when employers' role diminished.

Mobility in Key Dutch Industrial Centers

No Bicycle, No Bus, No Job traces how the state, industrial employers, and workers shaped twentieth century commuting in Dutch industrial centers. I do not discuss commuting as a phenomenon, but aim to reveal what factors enabled or inhibited the mobility of workers with a lower socioeconomic status. The book covers most of the twentieth century, specifically the emergence and decline of manufacturing industries in the Netherlands between 1920 and 1990. It travels along with workers through the interwar Great Depression, war and postwar age of destruction and scarcity, then postwar reconstruction and subsequent economic growth (1945-1973), ending in the recession after the 1973 oil crisis, global wave of deindustrialization, and onset of neoliberal public governance. This periodization makes it possible to unravel the relationship between workers' mobility and industrial-capitalist company governmentality.

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52   Serge Langeweg, *Mijnbouw en arbeidsmarkt in Nederlands-Limburg: Herkomst, werving, mobiliteit en binding van mijnwerkers tussen 1900 en 1965* (Hilversum: Verloren, 2011), 63-72.
53   Bouwens et al., *Door staal gedreven*, 119-120.
54   Herod, "Social Engineering," 26, 37.

Figure 1: The locations of the five case studies in the Netherlands

The book details how in mobilizing local, regional, and foreign labor forces, Dutch industrial employers used their power to develop mobility policies and infrastructures. The case studies are representative for the country and the era. I focus on major employers in five key industrial centers in the Netherlands (fig. 1), trailblazers for other (smaller) industries: Eindhoven's Philips electronics factories, IJmuiden's steel company Hoogovens, Limburg's mines, Twente's textile manufacturing, and Rotterdam's and Schiedam's docks.

Limburg's mines were located in the southern-most tip of the Netherlands, a hilly region bordering Belgium and Germany. Before mining expansion, the region's farmers earned a living on the land or in small manufacturing industries. Further north, the new town Eindhoven—a merger of villages like Woensel and Strijp—became home to national industries like car manufacturer DAF and electronics firm Philips. Near the eastern border with Germany, in the dispersed urban region of Twente, textile mills and machine factories were a common sight. Moving west to the North Sea coast, one finds IJmuiden, amid scattered towns and villages where people traditionally lived off agriculture and fishing before the steel plant Hoogovens opened in 1923. Further south, port city Rotterdam—together with bordering Schiedam—was a booming economic center with firms

like Van Nelle tobacco factory, transshipment companies, and shipyards. Over centuries, Rotterdam had developed into a polycentric urban region, close to other major Dutch cities like The Hague, in what today is known as the Randstad conurbation. During the twentieth century, Rotterdam's port district expanded westward towards the North Sea coast, away from major residential areas.

The geographically diverse industries encompassed the large companies—not small or medium-sized enterprises—that were key for the Netherlands' twentieth century industrialization. These selected companies provided jobs for a diverse and large-scale workforce: hundreds of thousands of unskilled and semi-skilled men and women from near and far who dug for coal, washed cotton, operated quay-side cranes, stapled steel sheets, and wired electronic devices among many other tasks. The corporations hired both Dutch and foreign workers in the postwar era; they included male-dominated and unionized industries like mining and shipping as well as electronics and textiles companies that provided employment to many young, unmarried, and rural women; and male migrant and ununionized workers from impoverished rural areas in Belgium, Germany, Spain, Turkey, Morocco seeking for better opportunities and political refugees from the former Dutch colony. The representative case studies allow me to compare and contrast historical trends in workers' mobility and identify potential social differentiation in workers' commute at the intersections of class, gender, ethnicity, and geographic location.

Until the 1960s, most low-skilled workers in the Netherlands were in heavy manufacturing industries. Like elsewhere in Europe, Dutch industrial employers recruited workforces based on relative cheapness, flexibility, and often weak unionization, not seldom from (rural) regions with rising unemployment. In the interwar period, managers often replenished urban labor forces with workers from the surrounding countryside and across the border. In the postwar push for industrialization, Dutch managers attracted more unskilled workers, who would accept dirty work, unpaid over-hours, lower wages, and complained less about poor working conditions. These were often young men and women, rural jobseekers, and migrant workers, characterized by low unionization and the least power to demand higher wages. Current research identifies these groups as the ones most often facing mobility barriers and with few resources to overcome mobility poverty.[55]

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55   Bastiaanssen, Johnson, and Lucas, "Does Transport Help," 607-628; Kenyon, Lyons, and Rafferty, "Transport and Social Exclusion," 207-219; Kuttler and Moraglio, *Re-Thinking Mobility Poverty*.

The workers in this study range from Dutch men and women living in urban or peri-urban areas near industries, to Belgian and German cross-border workers, migrant workers, and Moluccan exiles. These lower income and unskilled workers generally had limited resources to overcome adversity. By studying urban, peri-urban, rural, and migrant workers on their way to the workplace, *No Bicycle, No Bus, No Job* moves beyond the focus on urban (working-class) road users, common in mobility historiography.

I focus on these industrial growth centers to analyze how workers gained employment in widely varying geographical locations, ranging from nearby urban housing and peri-urban areas to remote rural villages and isolated housing sites for migrant workers. These areas differed in terms of spatial distance from industrial centers and socioeconomic geography. Many rural and migrant workers who landed jobs in Dutch industries came from impoverished regions with little prospect of work: they were forced to work further afield and travel significant distances, often with limited or poor mobility options. Yet it is important to bear in mind that these jobs usually provided a better and steady income: men earned more as a miner than as a farm or factory laborer, and women otherwise reliant on domestic labor enjoyed better pay in electronics and textile factories.

The study focuses on the actions of governments, industrial employers, and manual workers—occasionally reflecting on trade unions. According to Kuttler and Maraglio, mobility poverty research typically focuses on deprived social groups, governments that (fail to) provide bicycle paths, roads or public transit, and occasionally civil society groups that represent underserved populations or subaltern forms of mobility like walking and cycling.[56] Generally, employers fall outside this scope, though historically they were involved in many aspects of workers' daily lives as we have seen. Workers and employers—overlooked by mobility historians but identified as powerful agents by labor historians—exercised governance power in combination with the state. Including employers' and workers' perspectives in the study of commuting and job accessibility, reveals governing mobility was—and is—not solely a practice or responsibility of state actors or mobility-related advocacy groups. As *No Bicycle, No Bus, No Job* argues, workers and employers faced a similar dilemma: without efficient and affordable mobility, workers had no job and employers no workers. And since the late 1960s, scholars have argued that this is an issue the state should address.

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56   Kuttler and Moraglio, *Re-Thinking Mobility Poverty*, 14.

Grasping the Worker's Perspective of Mobility

The worker's perspective provides insight into mobility systems within their historical context. As historians know too well, and mobility historians like Gijs Mom, Colin Divall, and Peter Lyth have repeated, the challenge for a history-from-below is that ordinary people's experiences left barely any traces: "it requires ingenuity, tenacity and often no small measure of luck in conceiving of and locating sources that allow one to grasp something like the full complexity of human mobility."[57] Indeed the search for useful source materials has been challenging, but not impossible. In Dutch labor party and trade union archives at the International Institute for Social History in Amsterdam, and the Dutch Diary Archive (Nederlands Dagboekarchief), the everyday commute is hardly mentioned at all. With this absence of direct sources, I searched and found echoes of workers' voices in sources provided by employers, chambers of commerce, local governments, and stakeholders likely involved in workers' (im)mobility.

It is not only challenging to find sources, but also to avoid reading them exclusively and uncritically from the perspective of those in power. Since I am interested in industrial-capitalist employers' mindset, and question the underlying power relations, politics of control, and capitalist interests, I read source material in a way that theorists call, *along* and *against* the grain: to analyze the dominant reading of a text and engage in alternative or "resistant" reading. Such a reading scrutinizes the beliefs and attitudes that typically go unexamined in a text. It draws attention to the sources' gaps, silences, and contradictions.[58] Because of my interest in the workers' perspective, I often had to read between the lines and combine various historical and secondary sources to paint a fuller picture.

Evidence presented in this thesis ranges from primary and secondary written sources to quantitative data, which provide clues and information about mobility barriers and policy decisions in the past. First, searching digital newspaper and journal databases helped locate events and historical actors. Historical newspapers are available online in the Koninklijke Bibliotheek Delpher Database and via historical centers in Eindhoven, Rotterdam, and Schiedam. This processing identified moments in time

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57   Mom, Divall, and Lyth, "Towards a Paradigm," 33.
58   Reading against the grain is a methodological approach to (archival) sources developed by feminist scholars like Jamie Berlowe-Kayes in "Reading against the Grain: The Powers and Limits of Feminist Criticism of American Narratives," *The Journal of Narrative Technique* 19, no. 1 (1989): 130-140; and later by historical anthropogist Ann Laura Stoler, see *Along the Archival Grain: Epistemic Anxieties and Colonial Common Sense* (Princeton: Princeton University Press, 2009).

when workers faced barriers in accessing their places of work, providing windows to seek archival sources.

Second, for a more aggregate picture of evolving commuter patterns, I relied on small but rich historical scholarship on commuting, like the dissertations by Gerardus Theodorus Jozef Delfgaauw *De tendenzen tot decentralisatie in de vestiging der nijverheid* (1932) and Frits Bakker Schut *Industrie en Woningbouw* (1933). Census reports for 1947, 1960, and 1971 provide data on commuter patterns in terms of origin-destination, modal split, and occasionally class, gender, and age. These sources helped sketch a broader picture of mobility patterns and historically changing living and working locations.

Third, I consulted the Enschede, Eindhoven, and Rotterdam city archives, as well as Vaals archives, the Limburg Regional Historical Center in Maastricht that holds the State Mines and Oranje Nassau Mines archives, the National Archives, and NIOD Institute for War, Holocaust and Genocide Studies. These collections include city council minutes, correspondence, and reports, company, chambers of commerce, and factories' archives, and Ministry of Public Works collections. In the case of textile industries in and around Enschede, postwar bus transport was organized by an overarching organization: Central Bureau for Industrial Personnel Transportation (Centraal Bureau Industrieel Personeelsvervoer, CBIPE) and its collection is kept in Enschede's municipal archive. For the war years, NIOD collections provided valuable information about the negotiations between employers and the occupying Nazi-government, as well as the implementation and impact of centralized austerity measures on workers' everyday mobility.

A fourth source is company correspondence, internal minutes, reports, social affairs, and transportation departments. A novel aspect of my research is that I used these collections to gain insight in mobility development paths. Large Dutch companies' documents are not publicly accessible, like Philips Company Archives (PCA) and Tata Steel Central Archives (TSCA, formerly known as Hoogovens). Here I relied on the expertise and resourcefulness of professional company archivists who found relevant sources regarding the (in)direct role employers played in governing workers' mobility. Correspondence between workers, employers, state and non-state actors revealed the negotiations and networks underlying the governance of workers' mobility.

A fifth rich source is company personnel magazines. The International Institute for Social History houses a large collection. The in-house magazines I used are electronics company *Philips Koerier*, Hoogovens *Samen*, and textile industry magazines *Spil en Spoel* and *Mero-Meningen*. State Mine personnel

magazines *Stukkool* (1929-1942), *Steenkool* (1946-1955), and *Nieuws van de Staatsmijnen* (1952-1975) are available via heritage website De Mijnen, and personnel magazine *Wilton-Fijenoord Nieuws* via Schiedam city council archives. These magazines provide valuable insights in employers' perspectives on workers' mobility, as well as the orchestrated collaborations with other social actors to govern bicycle and moped riding workers.

For the 1970s, when the mining and textile industries collapsed, similar sources were not available, except for Hoogovens and Philips. For this period, work by Dutch sociologist Enne de Boer, who translated international scholarship on what was then referred to as 'transport poverty' into a Dutch context, proved invaluable, along with reports and magazines from Dutch bicycle and public transit advocacy groups like the Cyclist's Union and ROVER, established mid-1970s. Combined with newspaper items on transport poverty and job access debates during the 1970s recession and a collection of jurisprudence *Passende Arbeid* (Suitable Work), these materials gave me a sense of how car-less, captive cyclists and bus riders were able to get to work.

To understand the changing meanings of workers' mobility, *No Bicycle, No Bus, No Job* treats the topic chronologically. Chapter 1, "Responding to the Transport Mismatch, 1920-1940," highlights that workers opted for mobility alternatives to rail-based options. In this interwar period marked by recession, widespread unemployment, and a growing mismatch between where people lived and worked, cheaper bicycles and buses were vital for landing jobs. At the same time, these modes also became increasingly scrutinized by government authorities. In the case of paratransit bus services, Chapter 2, "Protesting Bus Regulations during the Depression, 1926-1938," shows how workers took action when the option to commute by bus was severely curtailed. In a case study of the Limburg mining region, I reveal the social impact and miners' active resistance against these bus regulations. With these first two chapters, I show that the state provided the physical and legal infrastructures that set the boundaries for how people could move, yet workers, eager to earn a living during the Great Depression, were resourceful and resilient in shaping their everyday mobility. Chapter 3, "Mobility Austerity during War and Scarcity, 1940-1947," covering the World War II period and its direct aftermath, reveals this was a precarious way of life. War efforts and widespread shortages raised mobility barriers. The German occupier, in co-operation with industrial employers, imposed national mobility austerity measures. In effect, the locus of control over mobility shifted from workers to the state and employers—serving as a prelude to the postwar era.

Historiography describes the postwar era as a "mobility explosion," due to the greater availability of new (motorized) transport technologies. In

chapters 4 and 5, I show that the practice of commuting greater distances was also born out of necessity. The Netherlands struggled with severe housing shortages until 1960 and public transit failed to bring solace for long-distance commutes as Chapter 4, "Mobility Barriers during Postwar Industrialization, 1947-1970" shows. This was also acknowledged by employers. Chapter 5, "Postwar Mobility Practices, 1947-1970," shows how blue-collar workers' travel horizons varied depending on their homes' location and available mobility options. This chapter details how urban and peri-urban workers typically cycled to their workplace—some discovering mopeds by the late 1950s—but rural and migrant workers travelled up to 100 km distances by company bus. Amid postwar industrialization, workers' mobility—like housing had been for decades—became a domain of company intervention, Chapters 6 and 7 reveal. Chapter 6, "Disciplining Cyclists and Moped Riders," details that as increasing motorized traffic made postwar roads busier than ever, company managers feared that traffic injuries and fatalities were a threat to productivity. Bicycle and moped riders were subjected to more collaboratively orchestrated forms of disciplining to prevent them falling victim to traffic. Ununionized rural and immigrant workers' movements by bus, in contrast, were top-down controlled by employers, as Chapter 7, "Mobilizing Rural and Immigrant Workers by Company Bus," explains.

Finally, the first postwar decades had seen large investments in heavy industry, a stringent government wage policy, and push for full employment: The downturn of the 1970s ended this trend. Chapter 8, "Leaving Workers to their Own Devices during Deindustrialization, 1970-1990," shows this also affected workers' mobility. With industrial closures, outsourcing, and automatization, company support for workers' mobility waned. Confronted with rising employment and forced cuts in public spending, the government gradually withdrew from supporting already insufficient public transit. Critical scholars raised concerns about the disastrous effects of decades of car-centered transportation and land-use planning on the car-less population's ability to travel—illustrated by the carpenter's case. Car ownership and usage had increased dramatically since the 1960s. For many workers, however, it was an enforced choice due to the lack of alternatives for traveling the great distances between home and workplace. For those without a car, a more limited travel horizon became a daily reality. And here we have come full circle. This concluding chapter describes the 1970s as a pivotal moment for scholars thinking about (im)mobility. It stands as a pre-amble to today's mobility poverty and justice debate.