

## Cycling Pathways



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# Cycling Pathways

*The Politics and Governance of Dutch Cycling  
Infrastructure, 1920-2020*

*Henk-Jan Dekker*

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*Maartensdijk, July 2021*

*Henk-Jan Dekker*



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# List of Abbreviations

## *Archives*

AE	Archief Eemland
BHIC	Brabants Historisch Informatie Centrum
DA	Drents Archief
GA	Gelders Archief
GAA	Gemeentearchief Amsterdam
GADH	Gemeentearchief Den Haag
GAZ	Gemeenterarchief Zeist
HCO	Historisch Centrum Overijssel
HGA	Haags Gemeentearchief
HUA	Het Utrechts Archief
NA	Nationaal Archief
NHA	Noord-Hollands Archief
RHCE	Regionaal Historisch Centrum Eindhoven

## *Organizations*

ANWB	Algemene Nederlandsche Wielrijders-Bond <i>Dutch Cyclists' Association</i> [Nowadays Royal Dutch Touring Club ANWB]
BOVAG	Bond van Automobielhandelaren en Garagehouders <i>Federation of Car Dealers and Garage Owners</i>
COW	Commissie van Overleg voor de Wegen <i>Consultation on Roads Committee</i>
CRM	Ministerie van Cultuur, Recreatie en Maatschappelijk Werk <i>Ministry of Culture, Recreation and Social Work</i>
CROW	Centrum voor Regelgeving en Onderzoek in de Grond-, Water- en Wegenbouw en de Verkeerstechniek <i>Centre for Regulations and Research in Civil and Traffic Engineering</i>
EMO	Eindhoven met Omstreken <i>Cycling Path Organization Eindhoven and surroundings</i>
ENFB	Echte Nederlandse Fietzersbond <i>Real Dutch Cyclists' Union</i>
ENWB	Enige Echte Nederlandse Wielrijdersbond <i>Only Real Dutch Cyclists' Union</i>
FB	Fietzersbond <i>Cyclists' Union</i>



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FNRV	Federatie van Nederlandse Rijkswielpadverenigingen <i>Federation of Dutch Cycling Path Organizations</i>
IPO	Interprovinciaal Overleg <i>Inter-Provincial Consultation</i>
KNLC	Koninklijk Nederlands Landbouwcomité <i>Royal Dutch Agriculture Committee</i>
NEVAS	Nederlandsche Vereniging voor Autosnelwegen <i>Dutch Highway Organization</i>
NIVS	Nederlands Instituut voor Volkshuisvesting en Stedebouw <i>Dutch Institute for Public Housing and Urban Development</i>
NTFU	Nederlandse ToerFiets Unie <i>Dutch Touring Bike Federation</i>
NUCA	Nederlandsche Unie van Chauffeurs en overig Automobielpersoneel <i>Dutch Union of Drivers and other Automotive Personnel</i>
PPD	Provinciale Planologische Dienst <i>Provincial Spatial Planning Office</i>
PWS	Provinciale Waterstaat <i>Provincial Public Works Administration</i>
RAI	Rijwiel- en Automobiel Industrie <i>Car and Bicycle Industry</i>
RWS	Rijkswaterstaat <i>National Public Works Administration</i>
SWOV	Stichting Wetenschappelijk Onderzoek Verkeersveiligheid <i>Road Safety Research Foundation</i>
UMO	Utrecht met Omstreken <i>Cycling Path Organization Utrecht and surroundings</i>
VNG	Vereniging van Nederlandse Gemeenten <i>Association of Dutch Municipalities</i>
VVN	Veilig Verkeer Nederland <i>Safe Traffic the Netherlands</i>
VVV	Vereniging voor Vreemdelingenverkeer <i>Dutch Tourist Information</i>

*Other Abbreviations*

BDU	Brede Doeluitkering <i>Broad Special-Purpose Grant</i>
GDU	Gebundelde Doeluitkering <i>Combined Special-Purpose Grant</i>
RONA	Richtlijnen Ontwerp Niet-Autosnelwegen <i>Design Guidelines Non-Motorways</i>
VERDI	Verkeer en Vervoer: Regionaal, Decentraal, Integraal <i>Traffic and Transport: Regional, Decentral, Integral</i>



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# Introduction

In 1930, B. Duyts, an accountant from the Dutch village of Loosdrecht, decided he had had enough. For years he had petitioned the municipality to improve the cycling route he used every day for getting to work, to no avail. There was an improvised path, but it was in poor condition, alongside a sand road; heavy lorries carrying tree trunks made it unsuitable for cycling. A well-paved separate cycling path, inaccessible to motorized vehicles, would make his commute safer and more pleasant. If the government would not build it, Duyts decided he could do it himself. He organized some neighbors and together they asked the town for a small subsidy to purchase paving material and wooden poles. They then improved the path by paving it and used the poles to separate it from the road, preventing cars and lorries from swerving onto the cycling path.<sup>1</sup> Duyts even placed signs at the beginning of the path banning motorized vehicles.

If Duyts thought this would be the end of his problems, he was wrong. Confusion broke out among local municipalities, the province of Noord-Holland, and provincial public works. Did Duyts have the authority as a private citizen to declare a part of this road an exclusive cycling path? Could this new cycling path be recognized as official? And if so, which government agency would be responsible for its maintenance? His municipality declined to take up this task. This infuriated Duyts, who argued that mobility was a right that was being denied to him and the other cyclists who used his street, Raaweg: like all citizens, they paid numerous taxes “and so like other citizens they could claim a right to a decent road rather than a quagmire.”<sup>2</sup> The town advised Duyts to find someone willing to maintain the path. This exasperated him: had he not done more than his fair share already by improving the path? Now it was up to local authorities to take responsibility and do their part in facilitating cycling traffic. As he wrote: “After all the trouble I have gone to already, it is not clear to me what further steps I could take to set up an arrangement regarding maintenance.” After all, Duyts stressed “that I, together with the Raaweg residents, have carried out repairs only as an absolute necessity” – could the authorities not show a little more initiative and willingness to help commuting cyclists?<sup>3</sup>

1 Archives Noord-Holland (NHA), Archive Provincial Public Works Noord-Holland (553), inv. no. 307.

2 NHA 553, inv. no. 307, letter B. Duyts to mayor and aldermen Hilversum, October 8, 1930.

3 NHA 553, inv. no. 307, letter B. Duyts, undated, around January 1931.



Citizens like Duyts played an important role in Dutch cycling governance. They were actively involved by organizing interest and action groups, lobbying the government to acknowledge their rights. While legally on the same footing, not all citizens of the state are treated the same way. Some groups have a higher status than others. Historically, policymakers and engineers in many countries accorded motorized travelers as a group higher status and privileges than cyclists. It is in this sense that the word citizen is used throughout *Cycling Pathways: The Politics and Governance of Dutch Cycling Infrastructure, 1920-2020*. In the Netherlands, as I will show, the political appreciation of cyclists as citizens with rights (to infrastructure, safety, comfort, and so on) was stronger than elsewhere. Had Duyts lived today, he could have commuted by bicycle almost anywhere along the many cycling-friendly and government-maintained roads in the Netherlands. Over nearly a hundred years, an extensive cycling network has been constructed in the Netherlands, for both recreational and utilitarian purposes. Today, constructing cycling infrastructure is considered a public good and a state task. As the 1930 episode shows, that was not always the case. What changed? How did providing for cyclists become a state task? Which actors shaped cycling policies and how did they do so? *Cycling Pathways* uncovers this governance process to shed light on the status of Dutch cyclists, both on the road and in policymaking from the 1920s to today.

Over the past few years, cycling has become considered the key to a sustainable and livable future for cities. International experts and scientists like urban planners John Pucher and Ralph Buehler praise Dutch cycling as a success story – even a cyclists’ paradise – and an example of a pathway to a more sustainable transport system.<sup>4</sup> Dutch engineers and planners share their knowledge about planning for cyclists all over the world.<sup>5</sup> As they are among the world’s most experienced cycling planners, this seems to make sense. On closer inspection, however, it is rather surprising. If Dutch experts are to help engineers in other countries, this presupposes that they know how to progress from these humble beginnings to a fully-fledged cycling system or network. This assumes historical knowledge about what led to this outcome. However, little has been written on the emergence of the Netherlands as a “cyclists’ paradise.”

How can the Dutch export their cycling knowledge to policymakers across the globe when so little is known about which government policies formed

4 John Pucher and Ralph Buehler, “Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany,” *Transport Reviews* 28, no. 4 (2008): 495-528.

5 For instance, through the Dutch Cycling Embassy: <https://www.dutchcycling.nl/en/>.

the Dutch cycling system? What role did the engineering community and social movements play? Should we ascribe a central role to non-governmental actors that tried to put cycling on the agenda? These questions need answers if we want to explain how the Netherlands became a nation of cyclists. And yet, historians have hardly focused on what is often considered one of the quintessential Dutch features. In fact, cycling is so mundane in the Netherlands that its history is not considered a serious issue of study. This project fills a knowledge gap important to both an international audience interested in boosting cycling levels and a Dutch audience wanting to understand how cycling became so deeply ingrained in everyday practices.

Studies of the history of urban cycling in the Netherlands are available, but none have covered the role of provincial and national governmental actors. While cycling activism has been studied, the role of citizens in social movements building expertise and political leverage requires further elaboration. *Cycling Pathways* addresses this gap by providing long overdue insights on mobility governance as a product of the interplay between engineering norms and ideology, politics, social movements, and users. This process of the mutual shaping of daily mobility in the Netherlands over the past century is central to this study. It shows the significant long-term consequences of mobility policies on aspects ranging from street design to the modal split and spatial planning. One of the insights of history – and mobility history in particular – is that decisions taken in the past often have far-reaching and unforeseen consequences. This mechanism is often referred to as *path dependence*: when decisions are built into concrete or asphalt, the results become hard to remove or modify.<sup>6</sup> A reflection on such policy choices made by various actors in the past, and the reasons behind them, can help us understand the present and shed some light on what (not) to do in the future.

The bigger question *Cycling Pathways* raises is: Why did the Netherlands become such a successful cycling country? Multiple factors explain this. As I explain in more detail below, Adri Albert de la Bruhèze, Frank Veraart, Martin Emanuel, and Ruth Oldenziel have proposed five key variables: spatial structure and morphology, the availability of mobility alternatives, the cultural status of cycling, government traffic policy, and the influence of social movements.<sup>7</sup> Given my ambition to discuss a long time

6 James Mahoney, "Path Dependence in Historical Sociology," *Theory and Society* 29, no. 4 (2000): 507-48.

7 Ruth Oldenziel, Martin Emanuel, Adri Albert de la Bruhèze, and Frank Veraart, eds., *Cycling Cities: The European Experience* (Eindhoven: Foundation for the History of Technology and

period (1920-2020), I limit myself to a focus on two interrelated factors: government traffic policy and the influence of organized citizens in social movements. Together, these shape the division of road space – in particular, cycling infrastructure. While cycling infrastructure may not be a sufficient condition for a successful cycling country, research suggests that it is a necessary condition in today's settings.<sup>8</sup> In high-automobility contexts, a combination of traffic-calming and traffic-separating measures are needed to make cycling broadly accessible to citizens. Historically, the distribution of road space and the provision of cycling space – sometimes seen as neutral and technical problems – are in fact political projects. The car's dominant place on our streets is the outcome of a contested and long-term process in which other modes of transport were denied access to the road. Politicians, policymakers, and engineers have governed – and still govern – this process, as have user-citizens organized in social movements and the media. Despite opposition, in many countries pro-car interests have managed to bar cyclists and pedestrians almost completely from the road; in many cases there is also little to no investment in separate infrastructure for these road users. The story of the Netherlands is different – *Cycling Pathways* addresses why.

My main research question is: to what extent has Dutch cycling governance since 1880 contributed to the success of the Netherlands as a cycling country? Two aspects of this research question, cycling and governance, need further elaboration and form persistent themes. The first is the term *cycling* itself. It suggests a uniformity that does not exist. Cyclists form a heterogeneous group, consisting of (partly overlapping) different usage types. Utilitarian cycling (from commuters to school going kids) is a different activity from recreational or sports cycling; urban cycling can be distinguished from suburban or rural practices. Age, gender, and social class also form dividing lines. Historically, not all these groups have received equal attention from policymakers, engineers, and activists. By studying policies for these different groups, made at multiple government levels over more than a century, this project goes further than existing cycling and mobility history.

To operationalize my main question, I ask a number of sub-questions. First, which actors were involved in cycling governance throughout the research period? Second, how did they frame cycling as a public good?

Rachel Carson Center for Environment and Society, 2016).

8 Paul Schepers et al., "The Dutch Road to a High Level of Cycling Safety," *Safety Science* 92 (2017): 264-73; John Pucher and Ralph Buehler, "Safer Cycling Through Improved Infrastructure," *American Journal of Public Health* 106, no. 12 (2016): 2089-91.



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Third, how did these actors interact to shape cycling policies? And finally, what were the main cycling policies resulting from this coalition? These questions, requiring extensive archival research, form the main empirical contribution of the project. To answer these questions, a series of roughly chronological chapters will discuss the actor coalitions around specific types of cycling, and the cycling policies and funding streams they organized.

## Introducing Cycling Governance

As the opening story of the Dutch cyclist and accountant suggests, the political appreciation of cycling has changed enormously over the past century. Moreover, social advocacy and state support for cycling developed in different ways in different countries, leading to vastly different material infrastructures. Together with other developments – the rise of automobility, competition with public transit, growing commuter distances, and changing cultural appreciation for cycling – politics and governance are key factors that shape cycling. But how do these political transformations take place at the level of everyday governance and policymaking? That is the question I study here. To demand a state role in cycling governance, cycling advocates need to make the case for cycling infrastructure as a public good. After agreeing that some form of cycling infrastructure provision is a state task, there are still multiple steps between that acknowledgement and realizing infrastructure. Engineering norms and the coordination and division of responsibilities between different state bodies must be agreed. This process, from abstract political claim-making to implementing concrete policies, forms the topic of this book. The concepts of governance and public good that will help me answer these questions on a theoretical level are elaborated below.

Governance is a broad concept that has generated a vast amount of scholarship in recent decades. The issue of governance has been inspired by the declining role of nation-states and their governments since the 1980s and the growing role of supranational organizations, market parties, and civil society. Governance theories use the term *steering* to allude to a society-centered view, as opposed to a state-centered one. This is apt for the analysis of the political and administrative processes that have shaped Dutch cycling, in which a key argument is that non-state actors played an important role. According to public administration scholar Walter Kickert, at the most basic level, governance is “the mutual steering relations between

State and society.”<sup>9</sup> A more elaborate definition, applied specifically to science and technology, comes from sociologists Susana Borrás and Jakob Edler, who consider governance “the way in which societal and state actors intentionally interact in order to transform [socio-technical and innovation] systems, by regulating issues of societal concern, defining the processes and direction of how technological artefacts and innovations are produced, and shaping how these are introduced, absorbed, diffused, and used within society and economy.”<sup>10</sup> Given its relatively recent rise to prominence and frequent theoretical application to developments since the 1980s, why is governance a suitable concept with which to analyze a history stretching back to the early 1900s? According to Kickert, “the concept of governance may be a novel theoretical invention of modern political and administrative sciences but the empirical phenomenon existed before.”<sup>11</sup> Similarly, political scientist Jeremy Richardson reminds us that “nonhierarchical styles of government are not at all new. Governments of all persuasions have always consulted and often bargained with a range of private actors in the formulation and implementation of public policy.”<sup>12</sup> Two other prominent scholars of governance, Mark Bevir and Rod Rhodes, have also noted that the idea of “a monolithic state in control of itself” is a myth. It obscures “the reality of diverse state practices that escaped the control of the center because they arose from the contingent beliefs and actions of diverse actors at the boundary of state and civil society. The state is never monolithic and it always negotiates with others.”<sup>13</sup> This is especially true of the Netherlands, as Kickert argues that “steering by a strong central State has hardly ever existed in the Netherlands. Governance has almost always been a matter of deliberation, persuasion, and compromise.”<sup>14</sup> In retrospect, the powerful role the state and its institutions could assume in the 1950s and 1960s seems to have been the exception rather than the rule.<sup>15</sup>

9 Walter J.M. Kickert, *The History of Governance in the Netherlands: Continuity and Exceptions* (The Hague: Elsevier Overheid, 2004), 10.

10 Susana Borrás and Jakob Edler, “Introduction: On Governance, Systems and Change,” in *The Governance of Socio-technical Systems: Explaining Change*, eds. Susana Borrás, and Jakob Edler (Cheltenham, UK: Edward Elgar Publishing, 2014), 14.

11 Kickert, *The History of Governance in the Netherlands*, 7.

12 Jeremy Richardson, “New Governance or Old Governance? A Policy Style Perspective,” in *The Oxford Handbook of Governance*, ed. David Levi-Faur (Oxford: Oxford University Press, 2012), 312.

13 Mark Bevir and R. Rhodes, *The State as Cultural Practice* (Oxford: Oxford University Press, 2010), 93.

14 Kickert, *The History of Governance in the Netherlands*, 8.

15 Walter J.M. Kickert, “Beneath Consensual Corporatism: Traditions of Governance in the Netherlands,” *Public Administration* 81, no. 1 (2003): 121-23.

How then did providing cycling infrastructure become a governmental task? As Part I, “Roots,” shows, this was never a foregone conclusion. What the state deemed part of its tasks varied over time and depended on what was regarded as a public good – a point also observed by sociologists.<sup>16</sup> According to sociologist Rhys Williams: “Everyone is in favor of the public good, but just what constitutes that public good – or more accurately, whose public good is to be promoted – is a matter of political contention.”<sup>17</sup> With regard to mobility, historians have convincingly shown how policymakers across the world saw the promotion and facilitation of automobility as a public good requiring extensive state intervention and funding. Cyclists also demanded infrastructure and provisions. The status of cycling infrastructure as a public good, however, has been far more precarious throughout the twentieth century. Cyclists and cyclists’ organizations have had to fight for this status. To quote Williams again: “Movements use particular constructions of the public good to frame public politics in ways that benefit their agenda. By talking about the public good in a particular way, movements simultaneously legitimate their involvement and solutions, while casting aspersions on their opponents’ positions. The discursive struggle is part of all public politics; a vision of the public good is a valuable tool in this process.”<sup>18</sup> Indeed, countless arguments for constructing cycling infrastructure as beneficial to society as a whole and cyclists in particular came to the fore in the Netherlands. Together, they presented a case that was sufficiently convincing to justify state funding and coordination.

My approach consists of tracing two long-term processes. The first is this (discursive) struggle to frame cycling as a public good. It pertains to the first two sub-questions: who is involved in cycling policy, and how do these key stakeholders frame cycling and consequently the government’s role? *Cycling Pathways* shows how state engineers, national and local politicians, and citizens (organized in social movements), throughout the history of cycling regarded particular types of cycling (recreational) as a public good, while ignoring others (utilitarian). The second process is the actual governance or steering process. This addresses the third and fourth sub-questions: what policy coalitions were established to govern cycling, and what policies did

16 Kevin Morrell, “Governance and the Public Good,” *Public Administration* 87, no. 3 (2009): 538–56.

17 Rhys H. Williams, “Constructing the Public Good: Social Movements and Cultural Resources,” *Social Problems* 42, no. 1 (1995): 124–44, 124.

18 *Ibid.*, 126.



they introduce? In other words, once some state role in cycling became accepted, how was this support translated into concrete policies? According to cycling historian James Longhurst, we can also term this the distinction between politics and policies: politics are “the rhetoric and mechanisms by which groups and individuals come to power,” whereas policy refers to “the deliberations, decisions, and actions of government in pursuit of a shared goal or public good.”<sup>19</sup> To analyze the policies put in place, I take inspiration from political sciences, that is, the Policy Arrangement Approach.<sup>20</sup> From the perspective of this theory’s proponents, the concepts in the policy arrangement approach serve as a heuristic framework that sensitizes us to certain processes and actors in governance. Accordingly, the four elements of the approach recur implicitly throughout each chapter but do not shape the actual structure of the chapters.

The proponents of the Policy Arrangement Approach define policy arrangements as “the temporary stabilization of the organization and substance of a policy domain at a specific level of policy making.”<sup>21</sup> Specific policy arrangements can explain how long-term processes of political change led to actual policy measures: it is the link that may clarify the functioning of a given policy network through four analytical lenses. One concerns the content or substance (the discourse) within the network. The other three concern organization, specifically focusing on the actors, their resources and power, and the rules of the game.

Substance is analyzed in terms of *policy discourse*, which refers to “concepts, ideas, views, *buzzwords* and the like, which give meaning to a

19 James Longhurst, *Bike Battles: A History of Sharing the American Road* (Seattle/London: University of Washington Press, 2015), 12.

20 Scholars studying the development of Dutch nature governance pioneered the Policy Arrangement Approach to governance. There are parallels between nature and cycling governance: both are policy areas dealing with issues that are local in scale, but still subject to rules and processes formed on a provincial, national, and international scale. In addition, local attempts to place nature protection on the political agenda resemble the cycling activists’ struggle in many ways: often a relatively small and powerless group was up against large vested interests (the agricultural lobby in the case of nature protection, the car lobby in the case of cycling activism). Several scholars have fruitfully applied this approach to Dutch environmental policy. See: Jan van Tatenhove, Bas Arts, and Pieter Leroy, eds., *Political Modernisation and the Environment: The Renewal of Environmental Policy Arrangements*, Environment & Policy, vol. 24 (Dordrecht: Kluwer, 2000); in particular “Policy Arrangements,” 53–69; also Bas Arts and Pieter Leroy, eds., *Institutional Dynamics in Environmental Governance*, Environment & Policy, vol. 47 (Dordrecht: Springer, 2006). On applying the theory: Rikke Arnouts, “Regional Nature Governance in the Netherlands: Four Decades of Governance Modes and Shifts in the Utrechtse Heuvelrug and Midden-Brabant” (PhD diss., Wageningen University, 2010).

21 Arts, Tatenhove, and Leroy, “Policy Arrangements,” 54.



policy domain.”<sup>22</sup> Often, one discourse will dominate a policy arrangement challenged by competing discourses. These discourses can have varying levels of specificity: “Consistency, elaboration, operationalization, and coherence, however, are not essential features of discourse.” On the contrary, “the vaguer a policy discourse ... the more open it is to different interpretations, the greater its mobilizing capability, and the more impressive its consensus-building ability.”<sup>23</sup>

Scholars analyze actors through the lens of so-called *policy coalitions*. These consist “of a number of players who share interpretations of a policy discourse or resources, in the context of the rules of the game.”<sup>24</sup> *Power and resources* refer to the actors’ access to resources that can help them influence political decisions or frame public debates and agendas. Power can also be seen as a more hidden phenomenon that creates a hierarchy of dependent relations among actors. Importantly, knowledge can also serve as a source of power and legitimacy. Finally, the *rules of the game* refer to the more informal, unwritten norms and political culture governing the interaction of stakeholders. Within these policy arrangements, change in time occurs either through conscious actions by actors within the network (agency) or through the influence of external factors beyond their control (structure).

The authors working with the policy arrangements approach prefer to approach the agency-structure issue through Giddens’s concept of structuration.<sup>25</sup> This concept tries to balance agency and structure, without giving primacy to either. *Duality of structure* is the idea that actors cannot act outside certain structures, but that they simultaneously shape and (re) produce them. As Marleen Buizer states in her book on local initiatives in nature policy: “Duality of structure means that there is a reciprocal relationship between actor and structure in which actors are neither powerless subjects of structure, nor powerful enough to change structure according to their wishes.”<sup>26</sup> Actors within the cycling governance coalition made contingent choices, but also operated in a landscape of (path-dependent) constraints. We need to take a long-term perspective to understand this.

22 Ibid., 56. Italics in original.

23 Ibid., 64.

24 Ibid., 57.

25 Anthony Giddens, *The Constitution of Society: Outline of the Theory of Structuration* (Cambridge: Polity Press, 1984). The debate on agency and structure is fundamental in history. For a collection of essays, see Merritt Roe Smith and Leo Marx, eds., *Does Technology Drive History? The Dilemma of Technological Determinism* (Cambridge, MA/London: MIT Press, 1994).

26 Marleen Buizer, “Worlds Apart: Interactions Between Local Policy Initiatives and Established Policy” (PhD diss., Wageningen University, 2008), 19.

While it is possible to concentrate purely on the survival of urban cycling after 1970, studying the cycling policies of the 1950s and 1960s helps us to understand the structures in which activists and engineers operated in Dutch cities from the 1970s onwards. We cannot, in turn, understand the 1950s and 1960s without investigating the roots of cycling policies in the 1920s. Earlier choices, often contingent and sometimes with unintended consequences, shaped the long-term development of cycling and cycling governance. One concept often invoked to study this process of foreclosure is path dependency.

The long timescale of this project allows me to investigate the long-term effects of certain policy choices, and the possible feedback mechanisms that create path dependent processes. As a policy domain, mobility and spatial planning produce mobility patterns and physical infrastructures like cycle paths which are so deeply embedded that changing them is both difficult and expensive.<sup>27</sup> Initial choices, albeit contingent and small, can in the long run have significant and almost unavoidable consequences.<sup>28</sup> According to historian James Mahoney, path dependency is often used loosely, becoming little more than the truism that “earlier events affect later possibilities and foreclose certain options.”<sup>29</sup> For a process to be properly called path-dependent, it has to be very hard to change at a later stage because of earlier choices. Positive feedback processes increase the cost of unmaking earlier decisions.<sup>30</sup>

So, the question is, can we explain the endurance of cycling with such a path-dependent process through a historical analysis? Did the large presence of cyclists in the Netherlands early on in history set in motion a positive cycle when planners provided for cyclists, leading to higher levels of cycling that in turn encouraged more pro-cycling policies?<sup>31</sup> The opposite may also be true. Where cycling levels are low, a vicious circle emerges: planners who believe

27 Anique Hommels, *Unbuilding Cities: Obduracy in Urban Sociotechnical Change* (Cambridge, MA: MIT Press, 2005); Anique Hommels, “Studying Obduracy in the City: Toward a Productive Fusion between Technology Studies and Urban Studies,” *Science, Technology, & Human Values* 30, no. 3 (2005): 323–51.

28 The classic example is the QWERTY keyboard: once a contingent choice, changing it now is nearly impossible: Paul A. David, “Clio and the Economics of QWERTY,” *American Economic Review* 75, no. 2 (1985): 332–37.

29 Mahoney, “Path Dependence in Historical Sociology,” 509.

30 Paul Pierson, *Politics in Time: History, Institutions, and Social Analysis* (Princeton: Princeton University Press, 2004), 21.

31 Martin Emanuel, “Moments of Unsustainability: Planning, Path Dependence, and Cycling in Stockholm,” in *Cycling and Recycling: Histories of Sustainable Practices*, eds. Ruth Oldenziel and Helmuth Trischler (New York/Oxford: Berghahn, 2016), 101–21.

cycling is on the decline do not invest in it; cycling subsequently becomes less attractive and the number of cyclists drops, which is used to justify withholding further support. Put differently, a self-reinforcing process in environments with both high and low cycling levels may become so ingrained in existing institutions that it is too costly to change. At the same time, emphasizing the constraints historical factors placed on actors may obscure that there is always room for agency as in Giddens's concept of structuration.

This historical study allows us to test ideas about path dependency. As I will show, the early stages of systematic roadbuilding in the 1920s and 1930s included a strong emphasis on parallel but separate cycling paths and fierce debates about cyclists' rightful place and the relationship between drivers and cyclists. Each group had different standpoints, and different outcomes were possible. As we will see, ultimately, traffic separation was the contingent solution. What path-dependent properties did this choice develop over the following decades? Path dependency theory suggests the need for a close look at the early, formative stage of Dutch roadbuilding policies (a "critical juncture" in theoretical terms), since so many of the later choices and developments could only take place within the limited range of possibilities left by these choices. It is also an open question whether engineers and policymakers were (or felt) compelled to continue catering to cyclists in the 1950s and 1960s, when the facilitation of automobility occupied the political center stage. Is there indeed a path dependency pattern here which made cycling relatively secure in the Netherlands, or was there a real danger of cycling disappearing almost entirely as it did in other European countries at this time?

To close this section on governance, some introductory remarks about the historical traditions and context of Dutch politics are in order. First, the Dutch political system has a decentralized tradition of local autonomy: lower provincial and municipal governments have a significant amount of independence. Twentieth-century national policymakers could not exert a great deal of influence on urban mobility planning. Taxation, which is largely centralized, is one crucial exception. The national government controls the distribution of funding as one of its most consequential means of steering policy at a local level. Financial decentralization only took place in the 1990s when the national government awarded an infrastructure budget to lower governments as a lump sum, which local communities could spend as they saw fit. Until that time, the Ministry of Public Works decided how much money each province received as a road budget. Further division meant that lower government levels could still spend this road budget on cycling facilities. These road budgets were limited and had to be supplemented with

occasional subsidies. While the national government took a strong role in the highway network from the early twentieth century, its focus on cycling came and went. When the state paid attention, it generated a significant boost for local governments. As it turns out, historically the structural, long-term, and sustained attention necessary to create good cycling conditions first came from the provinces and municipalities.<sup>32</sup>

A second characterization political scientists and historians often apply to the Netherlands is that of a “consensus-driven, neo-corporatist system.”<sup>33</sup> Society is seen to consist of different groups (*corpora*) whom certain people or organizations represent. Distinct from state (or fascist) corporatism, neo-corporatism is “explicitly a democratic model of bottom-up interest representation, hence the adjective ‘neo’.”<sup>34</sup> Characteristic of this model is that “the State recognizes a limited number of interest associations, involves them in the decision-making and commits them, grants them privileges and delegates the execution of certain public tasks to them.”<sup>35</sup> Indeed, as governance scholars Rudy Andeweg and Galen Irwin note: “The existence of strong, well-organized interest groups is an important precondition for a corporatist model of policy-making to work.”<sup>36</sup> This recognition is more or less informal, although in the Dutch context it has become common for the government to subsidize action groups – a measure of public recognition. State officials deliberate with these representatives of social groups to reach policy solutions which take into account as many interests as possible.<sup>37</sup>

32 Rudy B. Andeweg and Galen A. Irwin, *Governance and Politics of the Netherlands*, 2nd edition (Basingstoke: Palgrave Macmillan, 2005).

33 Caspar F. van den Berg, “Dynamics in the Dutch Policy Advisory System: Externalization, Politicization and the Legacy of Pillarization,” *Policy Sciences* 50, no. 1 (2017): 63–84, here 64; Frits van der Meer, Jos Raadschelders, and Toon Kerkhoff, “Van nachtwakersstaat naar waarborgstaat: proliferatie en vervlechting van het Nederlandse openbaar bestuur in de lange twintigste eeuw (1880–2005),” in *Duizend jaar openbaar bestuur in Nederland: van patrimoniaal bestuur naar waarborgstaat*, eds. Pieter Wagenaar, Toon Kerkhoff, and Mark Rutgers (Bussum: Coutinho, 2011), 221–90.

34 Kickert, *The History of Governance in the Netherlands*, 38.

35 Ibid.

36 Andeweg and Irwin, *Governance and Politics of the Netherlands*, 150.

37 Adriejan van Veen, “From Neo-Corporatism to Regulatory Governance: Interests, Expertise, and Power in Dutch Extraparliamentary Governance, c. 1900–2018,” in *Information and Power in History: Towards a Global Approach*, eds. Ida Nijenhuis Nijenhuis, Marijke van Faassen, Ronald Sluijter, Joris Gijsenbergh, and Wim de Jong (London: Routledge, 2020), 85–102; Erik Schrijvers and Stefan Couperus, “Voorbij verkiezing en parlement. Alternatieve representatie in Nederland na 1870,” in *Omstreden democratie. Over de problemen van een succesverhaal*, eds. Remieg Aerts and Peter de Goede (Amsterdam: Boom, 2013), 67–88; Ido de Haan, “Verplaatste democratie? Politieke representatie in functionele organen,” in *Omstreden democratie*, 89–107.

This search for consensus and compromise is often seen as a hallmark of Dutch political culture. Indeed, the political development of consensus and compromise in the cycling policy domain is analyzed in this book. At the same time, one consequence of this system where state officials and interest groups work closely together is “the fragmentation of policy-making into various ‘Iron Triangles’, ‘policy networks’ or ‘policy communities.’” Relatively isolated policy networks tend to focus “on a particular policy area without much attention to the full range of government activities.”<sup>38</sup> Relatively informal arrangements, personal contacts, and unwritten rules are often quite central to these networks.<sup>39</sup>

Third, the consensus-driven nature of Dutch politics is often analyzed as the “polder model.”<sup>40</sup> The term refers to the low-lying nation’s historical battle against water. The outside threat required people to work together, although the term’s applicability to this policy domain is contested.<sup>41</sup> Political science scholarship uses the concept to analyze economic policy and the negotiations between state, employers, and unions about wage and industrial policies. The question of whether the tensions between labor and capital are characterized by consensus-seeking rather than conflict is a hotly contested argument among political scientists. Nevertheless, we can say that “in a broader political science sense, neo-corporatism as State co-operation with interest groups certainly did exist in the Netherlands.” This is in line with an age-old tradition of “pragmatism, tolerance and consensus.”<sup>42</sup> Accommodating different interests by minutely negotiating policy choices and distributing costs and benefits more or less equally over society are characteristic of Dutch politics.

Regarding the workings of the national state bureaucracy, political scientists describe the Dutch governance system as heavily compartmentalized. Most ministries, in cooperation with society’s interest groups, form sectoral policy domains which struggle to communicate with other domains.<sup>43</sup> For infrastructure policy in general, this means that communication between

38 Andeweg and Irwin, *Governance and Politics of the Netherlands*, 158.

39 Rivke Jaffe and Martijn Koster, “The Myth of Formality in the Global North: Informality-as-Innovation in Dutch Governance,” *International Journal of Urban and Regional Research* 43, no. 3 (2019): 536–68.

40 A classic work is Arend Lijphart, *The Politics of Accommodation: Pluralism and Democracy in the Netherlands* (Berkeley: University of California Press, 1968).

41 Milja van Tielhof, “Op zoek naar het poldermodel in de waterstaatsgeschiedenis,” *Tijdschrift voor geschiedenis* 122, no. 2 (2009): 148–61.

42 Kickert, *The History of Governance in the Netherlands*, 12.

43 Andeweg and Irwin, *Governance and Politics of the Netherlands*, 149–63.



mobility, spatial planning, and recreation domains (all connected to cycling in different ways) did not always occur. In practice, this meant that different ministries governed and funded different types of cycling infrastructure. There are downsides and upsides to this dispersed governance system. Below the national level, the province is generally regarded as far less important than either the national state or the municipality. Both in terms of budget and personnel, the provincial level is quite small compared to the national and local level.<sup>44</sup> That said, the province plays a key role in mobility policy: traffic formed the largest item in the provincial budget until about 1980, and has remained a significant item since. The provinces also maintain their own provincial public work departments. While for many policy fields the province might be more or less ignored, in mobility policy it has had a significant role historically. In the first half of the twentieth century, national policymakers increasingly believed the province or region was the appropriate level for cycling governance – though the national state did consider automobility its mandate. Since the 1950s, provinces indeed took up this task to varying degrees and have remained significant in this domain. Applying these political science insights, I explore the multi-level nature of cycling governance.

## Taking Stock of Cycling History

How does cycling feature in historical scholarship? Historians of innovation have extensively studied the governance of (mobility) technologies like the bicycle as the friction between the experts or system-builders on the one hand and users on the other. In the seminal *Making Europe* book series, which analyzes European history of technology, this is one of the key lines of conflict.<sup>45</sup> Historians have discredited the popular narrative of omnipotent inventors who can shape the world exactly as they envision. The manifold

44 Theo A.J. Toonen, “Dutch Provinces and the Struggle for the Meso,” in *The Rise of Meso Government in Europe*, ed. L.J. Sharpe (London: Sage, 1993), 117–53; Michiel S. de Vries, “Institutional Fleecing: The Slow Death of Dutch Provinces,” *Public Organization Review* 4, no. 4 (2004): 295–315.

45 See first three volumes: Ruth Oldenziel and Mikael Hård, *Consumers, Tinkerers, Rebels: The People Who Shaped Europe*, vol. 1, *Making Europe* (New York/Basingstoke: Palgrave Macmillan, 2013); Martin Kohlrusch and Helmuth Trischler, *Building Europe on Expertise: Innovators, Organizers, Networkers*, *Making Europe*, vol. 2 (Basingstoke: Palgrave Macmillan, 2014); Per Högselius, Arne Kaijer, and Erik van der Vleuten, *Europe’s Infrastructure Transition: Economy, War, Nature*, *Making Europe*, vol. 3 (Basingstoke: Palgrave Macmillan, 2015); the other volumes are also important. On the entire series: Eda Kranakis, “Writing Technology into History,” *Technology and Culture* 62, no. 1 (2021): 212–40.

ways users shape technological objects and systems are well documented. Innovation sociologists Trevor Pinch and Nelly Oudhoorn's *How Users Matter* is one of the premier works in this tradition.<sup>46</sup> By tinkering with objects, by using them in different ways than intended, or even by not applying certain technologies, technology users can exert their influence. A significant amount of this literature focuses on how users shape the design and construction of particular technical objects like bicycles or cars.<sup>47</sup> Wiebe Bijker famously used the bicycle as an example of his SCOT approach.<sup>48</sup> This book does not focus on the bicycle as a technical object, but on how cycling citizens organized in social movements shaped cycling as a socio-technical system.

Users and non-state actors play a major role in shaping this socio-technical cycling system. Much institutional, legal, and financial power, however, lies with engineers and experts. Historians of technology have extensively studied technocracy – the idea that engineers and experts' supposedly neutral and value-free scientific approach can solve all kinds of (social) problems.<sup>49</sup> There is a consensus that engineers' approach to technology is not neutral: at no stage in the engineering process can we speak of a purely technical approach. According to Michel Callon, engineers should always also be seen as sociologists whose technological work is driven by a certain view of society.<sup>50</sup> Globally, automobility dominated their view of mobility for much of the twentieth century.<sup>51</sup> When the changing cultural climate of

46 Nelly Oudshoorn and Trevor Pinch, eds., *How Users Matter: The Co-Construction of Users and Technologies* (London: MIT Press, 2003).

47 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.

48 Wiebe E. Bijker, *Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change* (Cambridge, MA: MIT Press, 1995).

49 On technocracy in roadbuilding, see Johan W. Schot and Vincent Lagendijk, "Technocratic Internationalism in the Interwar Years: Building Europe on Motorways and Electricity Networks," *Journal of Modern European History* 6, no. 2 (2008): 196-217; Dick van Lente and Johan W. Schot, "Techniek als politiek: ingenieurs en de vormgeving van de Nederlandse samenleving," in *Techniek in Nederland in de twintigste eeuw – Deel VII – Techniek en modernisering, balans van de twintigste eeuw*, eds. Adri A. Albert de la Bruhèze, Harry Lintsen, Arie Rip and Johan Schot (Zutphen: Walburg Pers/Stichting Historie der Techniek, 2003). On the extensive European network of road engineers and planners, see Frank Schipper, "Driving Europe: Building Europe on Roads in the Twentieth Century" (PhD diss., TU Eindhoven, 2008).

50 Michel Callon, "Society in the Making: The Study of Technology as a Tool for Sociological Analysis," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, eds. Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch (Cambridge, MA: MIT Press, 1987), 83-103.

51 On conflicts between users and system-builders, see Peter Norton, *Fighting Traffic: The Dawn of the Motor Age in the American City* (Cambridge, MA: MIT Press, 2008).



the late 1960s and 1970s made cyclists more daring in voicing their demands, the system-builders had to acknowledge the gap between their vision of mobility and that of a large group of users. How did Dutch cyclists manage to address this knowledge gap between engineering models and daily practice?

*Cycling Pathways* studies the clash between road engineers and road users, specifically cyclists. Most traffic experts simply knew very little about how cyclists behaved, why they made certain (route and mode) choices, and had no insight into how they could improve cycling conditions and safety. Historian David Arnold has called traffic a manifestation of the “everyday state.”<sup>52</sup> Writing on British colonial policies in India, Arnold notes that “the world of urban planning was often far removed from the reality of life on the streets and the fractured modernity it represented.”<sup>53</sup> In the Dutch context, particularly since the 1960s, when critique of technocratic governance resonated and a more egalitarian social structure emerged – known by political scientists as the era of de-pillarization – this allowed lay persons like cyclists to influence urban planners and engineers. In other national contexts where this was not possible, cyclists could still use the bicycle in subversive ways to evade government control but did not have the power to change the planning and design of streets and road space.<sup>54</sup>

Until a few decades ago, historians writing on transport focused on one modality in one specific country, often centered around trains, cars, and airplanes; they dealt with the inventors and manufacturers of these machines and were less concerned with how these transport technologies shaped people’s lives and the political processes involved. Since then, the focus has shifted when new approaches to technology (SCOT, Actor-Network Theory, and others) made an inroad into transport history – as did the mobility studies by John Urry and Mimi Sheller.<sup>55</sup> This led mobility historian Gijs Mom to call for a move from this traditional transport history to a mobility history, or an “integrated transport history,” which examines the interaction between mobility modes and applies new methodological approaches.<sup>56</sup>

52 David Arnold, “The Problem of Traffic: The Street-Life of Modernity in Late-Colonial India,” *Modern Asian Studies* 46, no. 1 (2012): 120.

53 Ibid., 130.

54 David Arnold and Erich DeWald, “Cycles of Empowerment? The Bicycle and Everyday Technology in Colonial India and Vietnam,” *Comparative Studies in Society and History* 53, no. 4 (2011): 971–96.

55 Mimi Sheller and John Urry, “The New Mobilities Paradigm,” *Environment and Planning A: Economy and Space* 38, no. 2 (2006): 207–26; Peter Norton, “Urban Transport and Mobility,” *Technology and Culture* 61, no. 4 (2020): 1197–211.

56 State of the art in transport history: Gijs Mom, “What Kind of Transport History Did We Get?: Half a Century of JTH and the Future of the Field,” *The Journal of Transport History* 24, no. 2 (2003):



The approach opened up the possibility of studying non-motorized forms of transport like walking and cycling that scholars had ignored. Indeed, marginalized mobility groups like cyclists and pedestrians have received a boost in recent years, not least because of the rising interest in transport or mobility justice issues.<sup>57</sup>

In 2008, Gijs Mom and Ruud Filarski wrote an authoritative and thoroughly documented history of Dutch mobility. Yet the authors still focused on car use and the railroads, the development of their infrastructures, and the conflict between motorized and public transport in the Interbellum.<sup>58</sup> While acknowledging the strong role of “slow modes” of transport in the Netherlands, they did not analyze their emergence.<sup>59</sup> They characterized the emergence of the Dutch automobile system in the first half of the twentieth century as the outcome of an interplay of multiple actors with different goals and visions rather than a systematically planned effort. Mom and Filarski also argued that the car did not oust other forms of mobility in the Netherlands like in the US, where automobility took over pedestrianism, cycling, and public transit. The Dutch government did support railway

121-38; Gijs Mom, “The Crisis of Transport History: A Critique, and a Vista,” *Mobility in History* 6, no. 1 (2015): 7-19. For the debate on what a new mobility history should entail: Kevin Hannam, Mimi Sheller, and John Urry, “Editorial: Mobilities, Immobilities and Moorings,” *Mobilities* 1, no. 1 (2006): 1-22; Colin Michael Divall, Peter Lyth, and Gijs Mom, “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*, eds. Gijs Mom, Gordon Pirie, and Laurent Tissot (Neuchâtel: Alphil, 2009), 13-40; Colin Divall, “Mobilizing the History of Technology,” *Technology and Culture* 51, no. 4 (2010): 938-60; Peter Merriman, “Mobilities, Crises, and Turns: Some Comments on Dissensus, Comparative Studies, and Spatial Histories,” *Mobility in History* 6, no. 1 (2015): 20-34; Gijs Mom, “Mao or Merriman? On Pitjantjatjara and Other Mobilities – A Response,” *Mobility in History* 6, no. 1 (2015): 35-39.

57 Karel Martens, *Transport Justice: Designing fair transportation systems* (London: Routledge, 2016); Aaron Golub, Melody L. Hoffmann, Adonia E. Lugo, and Gerardo F. Sandoval, *Bicycle Justice and Urban Transformation: Biking for all?* (London/New York: Routledge, 2017); Mimi Sheller, *Mobility Justice: The Politics of Movement in an Age of Extremes* (London: Verso, 2018); Mimi Sheller, “Theorising Mobility Justice,” *Tempo Social* 30, no. 2 (2018): 17-34.

58 Gijs Mom and Ruud Filarski, *Van transport naar mobiliteit: de mobiliteitsexplosie [1895-2005]* (Zutphen: Walburg Pers /Stichting Historie der Techniek, 2008); Ruud Filarski and Gijs Mom, *Van transport naar mobiliteit: de transportrevolutie [1800-1900]* (Zutphen: Walburg Pers /Stichting Historie der Techniek, 2008); Ruud Filarski, “The Emergence of the Bus Industry: Dutch Transport Policy During the Interwar Years,” *Transfers* 1, no. 2 (2011): 61-82. As follow-up, a large international research network studied car mobility and truck transport vs public transportation networks and the coordination problems for national governments in the Interbellum. The bicycle did not have a prominent place, despite its importance: Bert Toussaint, “Using the Usable Past: Reflections and Practices in the Netherlands,” in *Transport Policy: Learning Lessons from History*, eds. Colin Divall, Julian Hine, and Colin Pooley (Farnham: Ashgate, 2016), 21-22.

59 Mom and Filarski, *De mobiliteitsexplosie*, 397.



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transport and inland navigation, which otherwise might not have survived.<sup>60</sup> Does this argument also apply to cycling?

A key point of contention concerned the issue of governance: who was responsible or had authority over parts of the system? This question also recurs in scholarship on the history of spatial and urban planning in the Netherlands. In the 1920s, planners claimed the region was the appropriate scale for planning. Municipalities, however, jealously guarded their autonomy and did not work with their neighbors. The national government was reluctant to legally enforce this regional cooperation.<sup>61</sup> According to planning historians Andreas Faludi and Arnold van der Valk, a measure of uniformity existed in Dutch planning, despite the absence of top-down hierarchical governance: “rule and order is not imposed from above, it pervades the Dutch way of doing things.”<sup>62</sup> They argue that ideas and informal documents are as important as the legal status of official plans.<sup>63</sup> Thus, it is crucial to heed the planning discourse. Extending this analysis to cycling means asking how engineers discussed cycling and its place in governance. In other words: who was regarded as responsible for governing cycling and who was regulating or facilitating cycling? Was this lack of a centralized, top-down approach also typical of cycling? And if so, can this uniformity be created through shared policy beliefs?

*Cycling Pathways* is not the first work to discuss cycling history. Although a relatively new field, growing numbers of studies are emerging in the past decade. The existing cycling history gravitates towards cultural approaches (cycling as a form of leisure and sociability) and focuses on the late nineteenth and early twentieth century.<sup>64</sup> This might have to do with an “elitist bias” in the sources, as when cycling becomes a mundane, everyday activity, it is harder to find traces in archives and published sources.<sup>65</sup>

60 Ibid., 390-93.

61 Hans van der Cammen and Len de Klerk, *Ruimtelijke ordening: van grachtengordel tot Vinex-wijk* (Utrecht: Spectrum, 2003), 118-19.

62 Andreas Faludi and Arnold van der Valk, *Rule and Order: Dutch Planning Doctrine in the Twentieth Century* (Dordrecht: Springer, 1994), 8.

63 Ibid., 61.

64 For overviews, Harry Oosterhuis and Manuel Stoffers, “‘Ons populairste vervoersmiddel.’ De Nederlandse fietshistoriografie in internationaal perspectief,” *BMGN – Low Countries Historical Review* 124, no. 3 (2009): 390-418; Harry Oosterhuis, “Bicycle Research between Bicycle Policies and Bicycle Culture,” *Mobility in History* 5 (2014): 20-36; Harry Oosterhuis, “Ingebakken gewoonte of buitenissige liefhebberij?” *Sociologie* 11, no. 1 (2015): 3-30; Harry Oosterhuis, “Cycling, Modernity and National Culture,” *Social History* 41, no. 3 (2016): 233-48.

65 Oosterhuis, “Cycling, Modernity and National Culture,” 235. For an interesting case on cycle paths for workers in north Sweden’s forests, see: Anna-Maria Rautio and Lars Östlund,

For certain countries, notably Italy, France, Spain, and Belgium, cycling historiography extends beyond this early focus but then concentrates on vibrant professional cycling cultures (related to national identity) without discussing the long history of everyday utility cycling.<sup>66</sup> As sociologists Colin Pooley, Jean Turnbull, and Mags Adams argue in their book on everyday twentieth-century mobility in the UK, this is unjustified. Everyday mobility might be a mundane activity, it is also a highly important one given the amount of time we devote to it, its frequency, and what it costs the environment (pollution), the economy (congestion), the government (costs of policies), society and culture (stress, alienation, lack of leisure), and individuals (time, health).<sup>67</sup> Cycling has been a key utilitarian mode of transport since at least the 1920s and requires the long view which I provide here. The rise, fall, and resurgence of cycling is a century-long story. Unlike most studies of cycling history, this book takes a perspective that stretches from the late nineteenth century to the present.

Scholars discussing utilitarian cycling in the twentieth century emphasize its marginalization by policymakers favoring the car. They demonstrate the

"Starvation Strings' and the Public Good: Development of a Swedish Bike Trail Network in the Early Twentieth Century," *Journal of Transport History* 33, no. 1 (2012): 42-63.

66 For France: Hugh Dauncey, *French Cycling: A Social and Cultural History*, (Liverpool: Liverpool University Press, 2012); Hugh Dauncey and Geoff Hare, eds., *The Tour de France 1903-2003: A Century of Sporting Structures, Meanings and Values* (London: Routledge/Cass, 2003); Hugh Dauncey and Geoff Hare, "The Tour de France: a Pre-Modern Contest in a Post-Modern Context," *The International Journal of the History of Sport* 20, no. 2 (2003): 1-29, and Philippe Gaboriau, "The Tour de France and cycling's Belle Epoque," 57-78. Another publication by Gaboriau pays utilitarian cycling some attention: Philippe Gaboriau, "Les trois âges du vélo en France," *Vingtième Siècle. Revue d'histoire* 29, no. 1 (1991): 17-34. For Belgium: Stijn Knuts and Pascal Delheye, "Identiteiten in koers: Roeselaarse wielrenners als kopmannen van lokale, regionale en (sub) nationale identiteiten, 1900-1960," *Belgisch Tijdschrift voor Nieuwste Geschiedenis/ Revue Belge de Histoire Contemporaine* 41, no. 1-2 (2011): 167-214; Stijn Knuts and Pascal Delheye, "Cycling in the City? Belgian Cyclists Conquering Urban Spaces, 1860-1900," *International Journal of the History of Sport* 29, no. 14 (2012): 1942-62; Stijn Knuts and Pascal Delheye, "Connecting City and Countryside? Faces of Cycling Mobility in Belgium, 1890-1914," *Dutch Crossing* 37, no. 3 (2013): 240-59. For Italy: Stefano Pivato, "The Bicycle as a Political Symbol, Italy, 1885-1955," *International Journal of the History of Sport* 7, no. 2 (1990): 173-87; Stefano Pivato, "Italian Cycling and the Creation of a Catholic Hero. The Bartali Myth," *International Journal of the History of Sport* 13, no. 1 (1996): 128-38. For Spain: Bernat López, "Sport, Media, Politics and Nationalism on the Eve of the Spanish Civil War: The First Vuelta Ciclista a España (1935)," *The International Journal of the History of Sport* 27, no. 4 (2010): 635-57; Bernat López, "The Failed Vuelta Ciclista a España of 1913 and the Launching of the Volta a Catalunya (1911-1913): Centre Versus Periphery in the Struggle for the Governance of Cycling in Early Twentieth-Century Spain," *Sport in History* 30, no. 4 (2010): 547-69.

67 Colin Pooley, Jean Turnbull, and Mags Adams, *A Mobile Century? Changes in Everyday Mobility in Britain in the Twentieth Century* (Aldershot: Ashgate, 2005), 9-10.



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various national contests with regard to political traditions and engineering policies. Studies on cycling in the US show this marginalization in convincing ways.<sup>68</sup> Historians like Peter Norton in *Fighting Traffic*, James Longhurst in *Bike Battles*, or Zack Furness in *One Less Car* show how American traffic policy forcefully pushed cycling aside – a clear contrast with the more accommodating and consensus-seeking approach to road space distribution in the Netherlands. Germany chose the middle path, establishing multiple initiatives around cycling path construction in the first half of the twentieth century, but not encouraging it to coalesce into a national culture as it did in the Netherlands.<sup>69</sup> Denmark's political traditions and cycling culture seem closest to those of the Netherlands, but a national account beyond Copenhagen is still lacking.<sup>70</sup> For other countries, publications on cycling history are few and

68 On Canada and The United States: Glen Norcliffe, *The Ride to Modernity: The Bicycle in Canada, 1869-1900* (Toronto: University of Toronto Press, 2001); Norton, *Fighting Traffic*; Zack Furness, *One Less Car: Bicycling and the Politics of Automobility* (Philadelphia: Temple University Press, 2010); Christopher W. Wells, *Car Country: An Environmental History* (Seattle: University of Washington Press, 2012); Lorenz Finison, *Boston's Cycling Craze, 1880-1900: A Story of Race, Sport, and Society* (Amherst: University of Massachusetts Press, 2014); Longhurst, *Bike Battles*; Evan Friss, *The Cycling City: Bicycles and Urban America in the 1890s* (Chicago: University of Chicago Press, 2015); Evan Friss, *On Bicycles: A 200-year History of Cycling in New York City* (New York: Columbia University Press, 2019). Longhurst covers American cycling, which he argues was resilient enough to survive the strongly car-centred policies of the 1900s. See also Bruce Epperson, "The Great Schism: Federal Bicycle Safety Regulation and the Unraveling of American Bicycle Planning," *Transportation Law Journal* 37, no. 2 (2010): 73-118; Bruce Epperson, *Bicycles in American Highway Planning: The Critical Years of Policy-Making 1969-1991* (Jefferson, NC: McFarland & Company, 2014).

69 Verein Deutscher Fahrrad-Industrieller, *Festschrift zum Vierzigjährigen Bestehen des Vereins Deutscher Fahrrad-Industrieller e.V. 1888-1928* (Berlin: Verein Deutscher Fahrrad-Industrieller, 1928), 88-98; Burkhard Horn, "Vom Niedergang eines Massenverkehrsmittels – Zur Geschichte der Städtischen Radverkehrsplanung" (Master Thesis, Gesamthochschule Kassel, 1990); Volker Briese, *Besondere Wege für Radfahrer. Zur Geschichte des Radwegebaus in Deutschland von den Anfängen bis 1940* (Unpublished manuscript, Paderborn, 1993); Thomas Fläschner, "Stahlroß auf dem Aussterbe-Etat: zur Geschichte des Fahrrades und seiner Verdrängung in den 50er-Jahren," *Eckstein – Journal für Geschichte* 9 (2000): 4-22; Anne-Katrin Ebert, *Radelnde Nationen: Die Geschichte des Fahrrads in Deutschland und den Niederlanden bis 1940* (Frankfurt: Campus Verlag, 2010); Thomas Fläschner, "Zum Gebrauch des Rades gezwungen: Fahrradkultur in Saarbrücken zwischen 1885 und 1939," in *Saarbrücken in Fahrt: 125 Jahre Automobil an der Saar*, eds. Hans-Christian Herrmann and Ruth Bauer, Veröffentlichungen des Stadtarchivs Saarbrücken, vol. 1 (Marpingen-Alsweiler: Edition Schaumberg, 2011), 184-221. I am very grateful to Thomas Fläschner and Burkhard Horn for sharing their work.

70 Trine Agervig Carstensen et al., "The Spatio-Temporal Development of Copenhagen's Bicycle Infrastructure, 1912-2013," *Geografisk Tidsskrift-Danish Journal of Geography* 115, no. 2 (2015): 142-56; Martin Emanuel, "Making a Bicycle City: Infrastructure and Cycling in Copenhagen since 1880," *Urban History* 46, no. 3 (2019): 493-517; Walther Knudsen and Thomas Krag, *På cykel i 100 år – Dansk Cyklist Forbund 1905-2005* (Copenhagen: Dansk Cyklist Forbund, 2005); Marie

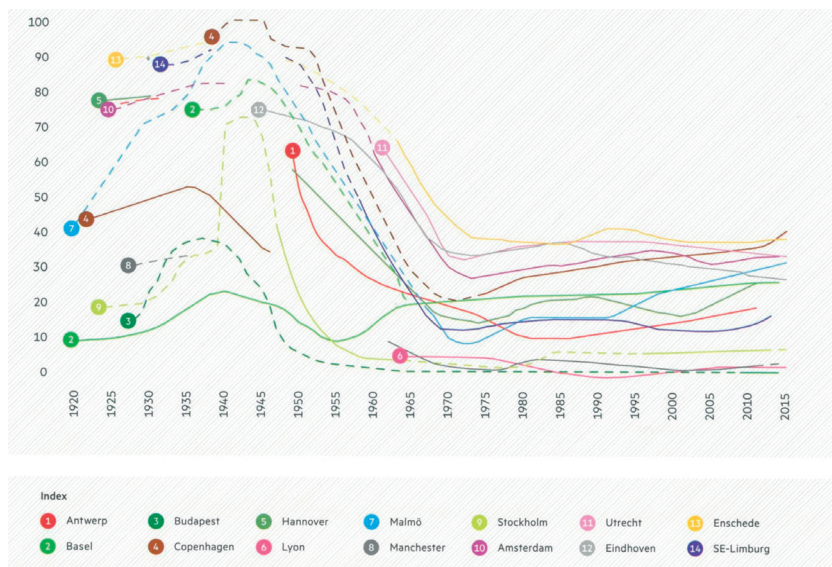


Figure 1 Cycling trends as part of the modal split in fourteen European cities/areas from 1920 to 2015, in percentages. By Frank Veraart in *Cycling Cities: The European Experience*, 13.

far between.<sup>71</sup> Most scholarship explains why once thriving cycling cultures disappeared in the mid-1900s. The belief in the modernity of driving and the outdatedness of cycling typically explain why policymakers neglected cyclists. Yet the larger question is why cycling levels, while following international trends, remained so much higher in the Netherlands, even when automobility levels eventually became as high there as elsewhere (see figure 1).

Explaining the historical development of cycling is a complex affair involving multiple causal factors. Rather than providing simplistic mono-causal explanations, as the American bicycle historian Bruce Epperson has emphasized, “clear cause-and-effect-explanations have proven elusive” and there is more to explaining cycling levels historically than one might think.<sup>72</sup> Simple explanations pointing to the (flat) morphology of the Dutch

Kåstrup, “Hverdagens beskedne demokrati – Analyser af cyklen som symbol på danskhed” (Master thesis, University of Copenhagen, 2007).

71 On Ireland: Erika Hanna, “Seeing Like a Cyclist: Visibility and Mobility in Modern Dublin, c. 1930–1980,” *Urban History* 42, no. 2 (2015): 273–89. On Sweden: Rautio and Östlund, “Starvation Strings’ and the Public Good.” For Finland: Tiina Männistö-Funk, “The Crossroads of Technology and Tradition: Vernacular Bicycles in Rural Finland, 1880–1910,” *Technology and Culture* 52, no. 4 (2011): 733–56.

72 Epperson, *Bicycles in American Highway Planning*, 59. Also arguing that geographical conditions only partly explain cycling levels, Trine Agervig Carstensen and Anne-Katrin Ebert,



landscape and the shorter distances traveled are not sufficient either: even between Dutch cities, cycling levels vary considerably. In their review of the historiography of Dutch cycling, historians Harry Oosterhuis and Manuel Stoffers note the cycling scholarship's suggestions that policy choices made decades earlier often explain differences in present cycling levels. Additionally, the interaction between policy and cultural perceptions of cycling are key explanatory factors.<sup>73</sup>

The first and most rigorous explanation of why cycling levels diverged so much internationally after very similar rates in the early 1900s, comes from the single most important source on which my project builds: Adri Albert de la Bruhèze and Frank Veraart's pioneering work on cycling history, *Fietsverkeer in praktijk en beleid in de twintigste eeuw* ("Cycling Traffic in Practice and Policy in the Twentieth Century," published in 1999). They study the historical evolution of cycling levels and practices in nine European cities over a century, to explain the high Dutch level of cycling: Amsterdam, Eindhoven, Enschede, and the South-East-Limburg agglomeration within the Netherlands, as well as Antwerp, Manchester, Copenhagen, Hannover, and Basel. Through the painstaking collection of statistical data and other qualitative methods, the authors reveal very high cycling levels until roughly the 1950s, when they dropped sharply. In some countries cycling almost disappeared, while in others such as the Netherlands, cycling levels were still respectable even at their lowest point, around 1970: some 20-25 percent in most Dutch cities. Since the 1970s, cycling levels have stabilized or even risen again.

According to Albert de la Bruhèze and Veraart, there are four major causal factors: (1) spatial structure: suburbanization and increased commuting shape people's mobility options. Increasing distances to work limit the potential for cycling if public transit is lacking and cars are the only alternative. In countries with good public transit, these long distances can still be negotiated using bike-train combinations, though this requires investment in bicycle parking facilities at stations; (2) availability of mobility alternatives such as public transit and the car: wage growth influences car ownership and use, as does car tax and the status of car ownership; (3) cycling's place in traffic policy: to what extent authorities are interested in cycling at all, and if so, whether and how they promote it; and (4) cultural perceptions of the bicycle: important in that cycling and driving have different connotations: if cycling is perceived as low-status or old-fashioned, this will limit the

"Cycling Cultures in Northern Europe: From 'Golden Age' to 'Renaissance'," in *Cycling and Sustainability*, ed. John Parkin (Bingley: Emerald, 2012), 23-58.

73 Oosterhuis and Stoffers, "Ons populairste vervoersmiddel," 400.

amount of people willing to cycle, as well as authorities' support. This is what happened historically in many Western countries and is now happening across the globe in growing economies where the car is a sign of status and progress.<sup>74</sup> A recently added fifth actor is the role of social movements in demanding more space for cyclists and their (Dutch) success in working with the government to achieve this. As widespread as social unrest over car-centric cities was in the 1970s, relevant research is still in its infancy. Harald Engler notes in a recent article on German protest movements "resistance towards the car-friendly city ... is still under-researched."<sup>75</sup>

The addition of social movements as a factor came from a major new impetus in cycling history research when a wider group of researchers led by Ruth Oldenziel took up Albert de la Bruhèze and Veraart's work and worked with them to create a new, updated, and expanded publication in English: *Cycling Cities: The European Experience* (2016). Along with the extended explanatory framework, new cities were added: Utrecht, Enschede, Malmö, Stockholm, Budapest, and Lyon.<sup>76</sup> Since then, more cities have shown an interest in their own cycling history and commissioned further books. To date these include Rotterdam, The Hague, Arnhem/Nijmegen, and Maastricht, as well as a growing number beyond the Netherlands, such as Munich and Johannesburg.<sup>77</sup> Together, these researchers have done invaluable work exploring neglected forms of everyday mobility through

74 Ruth Oldenziel, "Mode of the Past or Promise for the Future? Cycling in China and the Sustainability Challenge, 1955-Present," *Zeithistorische Forschungen/Studies in Contemporary History* 14, no. 3 (2017): 465-86. In a colonial context, cycling had a subversive potential as low-technology transport mode that escaped regulations. See Arnold and DeWald, "Cycles of Empowerment?"

75 Harald Engler, "Social Movement and the Failure of Car-friendly City Projects: East and West Berlin (1970s and 1980s)," *Journal of Transport History* 41, no. 3 (2020): 353-380, here 354. For German resistance to car-centric cities: Astrid Mignon Kirchhof, "For a Decent Quality of Life": Environmental Groups in East and West Berlin," *Journal of Urban History* 41, no. 4 (2015): 625-46; Annika Levels, "(Re-)claiming Urban Streets: The Conflicting (Auto)mobilities of Cycling and Driving in Berlin and New York," *The Journal of Transport History* 41, no. 3 (2020): 381-401.

76 Oldenziel et al., *Cycling Cities: The European Experience*.

77 Eric Berkens and Ruth Oldenziel, *Cycling Cities: The Arnhem and Nijmegen Experience* (Eindhoven: Foundation for the History of Technology, 2017); Eric Berkens, Frans Botma, and Ruth Oldenziel, *Cycling Cities: The Hague Experience* (Eindhoven: Foundation for the History of Technology, 2018); Adri A. Albert de la Bruhèze and Ruth Oldenziel, *Cycling Cities: The Munich Experience* (Eindhoven: Foundation for the History of Technology, 2018); Erik Berkens, Frank Schipper, Patrick Bek and Ruth Oldenziel, *Cycling Cities: The Rotterdam Experience* (Eindhoven: Foundation for the History of Technology, 2019); Njogu Morgan, *Cycling Cities: The Johannesburg Experience* (Eindhoven: Foundation for the History of Technology, 2019); Eric Berkens, "Fietsgebruik en -beleid in Maastricht en Parkstad in historisch perspectief," (Eindhoven: TU Eindhoven/Stichting Historie der Techniek, 2017).

comparative analysis across cities worldwide. The focus is on cities – and as this is a relatively new field of research, many questions remain.

Taking a national approach, my research asks, to what extent has Dutch cycling governance since 1920 contributed to the success of the Netherlands as a cycling country? Building on the governance and politics of cycling scholarship, which takes the city as its point of departure, I also investigate how policymakers at provincial and national levels have influenced cycling policies in the Netherlands. Historian Anne-Katrin Ebert also identified this gap in her review of *Cycling Cities*, stating that “the historical intertwining of urban and national policies is not investigated in any systematic way in this volume.”<sup>78</sup> I respond to Ebert’s call by investigating the intertwining of this multi-level dynamic of governance. I also take into account the important role of non-state actors in shaping policy. Like *Cycling Cities*, but unlike many other studies of cycling history, I study a timescale from the early 1900s to the present. My goal is to elucidate the dynamics between different governance levels and thus enrich the picture these authors sketched of cycling governance at the city level. My work on the intricacies of Dutch cycling governance examines two of the *Cycling Cities* project’s explanatory factors: cycling’s place in traffic policy and the role of social movements. The concept cycling governance captures both. Given the important historical role of social movements in Dutch cycling history, I consider these factors together rather than in isolation. When relevant for my analysis, I discuss other explanatory factors in the *Cycling Cities* comparative model. Engineers, policymakers, and politicians’ cultural perception of cycling partly explains their political choices.<sup>79</sup> Traffic policies also include other transport modes linked to cycling policies. Finally, spatial planning is closely related to traffic planning and will feature in certain case studies.<sup>80</sup> There is still much work to do, and this book can only cover part of that ground.<sup>81</sup>

78 Anne-Katrin Ebert, “Review of: Ruth Oldenziel, Martin Emanuel, Adri Albert de la Bruhèze, Frank Veraart eds., *Cycling Cities: The European Experience*,” *The Journal of Transport History* 39, no. 1 (2018): 128–30.

79 A good example is Martin Emanuel’s “Constructing the Cyclist: Ideology and Representations in Urban Traffic Planning in Stockholm, 1930–70,” *The Journal of Transport History* 33, no. 1 (2012): 67–91.

80 On the integration of spatial and transport planning: Gijs Mom, “The Emancipation of the Urban View: Dutch Spatial Planning in an International Context (1920–1950),” in *Builders and Planners: A History of Land-Use and Infrastructure Planning in the Netherlands*, eds. Jos Arts, et al. (Delft: Uitgeverij Eburon, 2016), 73–137; Gijs Mom, “The West and the Rest: The Green Heart and the Breakthrough of Spatial Planning (1950–1982),” in *Builders and Planners*, 143–99.

81 See forthcoming books by Patrick Bek and Jan Ploeger, who both provide crucial new perspectives on commuter patterns and the spatial aspects of mobility.



Other Dutch cycling works deserve a mention in this introduction. Particularly important are Albert de la Bruhèze and Oldenziel's articles on Dutch bicycle tax and cycling path construction.<sup>82</sup> They apply the contextualized approach also used here, by looking at cycling policy in the context of mobility policy and the governance of other modes of transport, through comparisons with car policies. Crucial in the bicycle tax debate was the alleged status of the bicycle as a luxury good, or the very definition of what constituted a public good, as in the American debate on bicycle taxes around 1900 that James Longhurst has rescued from oblivion.<sup>83</sup> For Longhurst, these debates raging continuously, from the introduction of the bicycle in the late 1860s up to the present, revolved around seeing the street and road space as an "exhaustible resource" and should be considered "attempts to support or delegitimize competing interest-group claims to an exhaustible resource."<sup>84</sup> In the Dutch case, Albert de la Bruhèze and Oldenziel emphasize the class dimensions of this struggle. Upper-class drivers literally marginalized the working-class cyclist.<sup>85</sup> Cyclists – of all classes and types – were forced to pay a bicycle tax that was used to build roads (for a small elite) on which these cyclists were no longer welcome.

This analysis is closely linked to the Foucauldian analysis of cycling by sociologist Jennifer Bonham and Peter Cox, who consider cycling paths a way to marginalize cyclists. These paths force cyclists to squeeze into a mobility system that is planned from the driver's perspective and only grudgingly gives in to other road users' demands.<sup>86</sup> Albert de la Bruhèze and Oldenziel emphasize how traffic separation favored car users in the interwar period when cyclists were dominant and cars in the minority, but nevertheless, "policymakers, traffic engineers, and urban planners were all

82 Adri A. Albert de la Bruhèze and Ruth Oldenziel, "Who Pays, Who Benefits? Bicycle Taxes as Policy Tool, 1890-2012," in *Cycling and Recycling: Histories of Sustainable Practices* eds. Ruth Oldenziel and Helmuth Trischler (New York/London: Berghahn, 2015), 73-100. Ruth Oldenziel and Adri A. Albert de la Bruhèze, "Contested Spaces: Bicycle Lanes in Urban Europe, 1900-1995," *Transfers* 1, no. 2 (2011): 29-49. On the Dutch bicycle tax between 1926 and 1941, see F.H.M. Grapperhaus, *Over de loden last van het koperen fietsplaatje. De Nederlandse rijwielbelasting 1924-1941* (Franeker: Uitgeverij Van Wijnen, 2006); Anja Lelieveld, "Het plaatje met of zonder gaatje," *De oude fiets* 1992, no. 2 (1992): 1-8; Otto Beaujon, "De Franse fietsbelasting," *De oude fiets* 1997, no. 3 (1997): 4-6.

83 James Longhurst, "The Sidepath Not Taken: Bicycles, Taxes, and the Rhetoric of the Public Good in the 1890s," *Journal of Policy History* 25, no. 4 (2013): 557-86; Longhurst, *Bike Battles*.

84 Longhurst, *Bike Battles*, 20.

85 Albert de la Bruhèze and Oldenziel, "Who Pays, Who Benefits?," 74-75.

86 Jennifer Bonham and Peter Cox, "The Disruptive Traveller? A Foucauldian Analysis of Cycleways," *Road and Transport Research* 19, no. 2 (2010): 42-54.

convinced, even though bicycle use was booming in most cities, that cars would inevitably be the dominant mode of transport in the future.”<sup>87</sup> The analysis of marginalized non-motorized road users is also studied historically from the pedestrian perspective.<sup>88</sup>

To explain cycling's unique position in the Netherlands, historian Ebert, who compared Dutch and German cycling history in her important study *Radelnde Nationen*, points to the role of the tourist organization ANWB (*Algemene Nederlandsche Wielrijders-Bond* – “Dutch Cyclists’ Association”), an association that started as a cyclists’ club in 1883, before becoming an interest group for both car drivers and cyclists around 1920, then evolving into a defender of drivers in the present day. She argues that because the ANWB was the only cycling organization in the Netherlands, it could convincingly claim to represent all cyclists. This gave it the political clout that the divided German organizations never achieved. During the formative period of Dutch roadbuilding, in the 1920s and 1930s, the organization strongly advocated traffic separation as being in the interest of both drivers and cyclists. According to Ebert, the existence of the bicycle tax was a key bargaining chip in these debates, and the powerful ANWB used it to claim investments in cycling paths.<sup>89</sup> This important argument will be discussed in Chapter 2.

Cycling's cultural status is also important in *Cycling Cities*, yet strikingly, while cycling is seen as typically Dutch, cultural-historical studies of this phenomenon are still lacking. The only major contribution is an article by sociologist Giseline Kuipers, who coined the phrase “inconspicuous

87 Oldenziel and Albert de la Bruhère, “Contested Spaces,” 37.

88 For an introduction to the topic, Colin Pooley et al., “Introduction: historical perspectives on pedestrians and the city,” *Urban History*, 1-7. For case studies: Martin Emanuel, “Controlling Walking in Stockholm during the Inter-War Period,” *Urban History* 48, no. 2 (2021): 248-65; Peter Norton, “Persistent Pedestrianism: Urban Walking in Motor Age America, 1920s-1960s,” *Urban History* 48, no. 2 (2021): 266-89; Peter Norton, “Street Rivals: Jaywalking and the Invention of the Motor Age Street,” *Technology and Culture* 48, no. 2 (2007): 331-59; Joe Moran, “Crossing the Road in Britain, 1931-1976,” *The Historical Journal* 49, no. 2 (2006): 477-96; Muhammad M. Ishaque and Robert B. Noland, “Making Roads Safe for Pedestrians or Keeping Them Out of the Way?,” *The Journal of Transport History* 27, no. 1 (2006): 115-37. See also Martin Emanuel, Frank Schipper, and Ruth Oldenziel, eds., *A U-Turn to the Future: Sustainable Urban Mobility since 1850* (New York: Berghahn Books, 2020).

89 Anne-Katrin Ebert, “When Cycling Gets Political: Building Cycling Paths in Germany and the Netherlands, 1910-40,” *Journal of Transport History* 33, no. 1 (2012): 123-26; Frank Veraart, “Fietspaden. Van gerieflijke paden tot fietsbeleid,” *Verkeerskunde* 60, no. 5 (2009): 23-24. On the ANWB's involvement in cycling path construction, see Hans Buitier, “Als een spin in het web: de ANWB en de Nederlandse rijwielpadenverenigingen,” *Tijdschrift voor historische geografie* 1, no. 2 (2016): 76-86.

consumption” to explain why the Dutch did not immediately adopt higher-status cars when these became affordable.<sup>90</sup> By continuing to cycle, Dutch citizens, so goes the argument, displayed qualities like being down to earth and modest, which are valued more than conspicuous displays of wealth. This is also why the Dutch royal family and leading politicians like to have their photo taken on bicycles. I will not go into detail here, but it will become clear how deeply ingrained cycling was and is in Dutch mobility practices and cultural representations. Cycling’s relationship with national identity surely deserves further research. Similarly, whether people have mobility alternatives affects cycling levels – like the late diffusion of car ownership in the Netherlands, coupled with limited public transit. These factors will only feature tangentially in my research.

My research contributes to cycling historiography by furthering our understanding of the long-term development of cycling governance, that is, the way state actors and non-state actors like user advocacy groups and social movements shaped cycling infrastructure and traffic policies in the Netherlands. Uniquely, I adopt a multi-level rather than an urban perspective. Albert de la Bruhèze and Veraart have already acknowledged the role of traffic policy. Their project was – by design – limited to urban governance. This implies that urban cycling, a successful local form of transport, is also governed locally. Particularly in a small, densely networked country like the Netherlands, the question is whether regional or even national governance has also shaped cycling. Investigating these national and provincial policymakers and engineers presents a new multi-level perspective on Dutch cycling governance. National government’s control of transport budgets is only one example of why it matters to study higher government levels. In addition, *Cycling Cities*’ 2016 edition added the major claim that social movements were crucial in putting urban cycling on the agenda. There is hardly any scholarship on the origins and methods of these movements, nor their relations with the Dutch government. Scholars focus on other forms of Dutch activism but mobility- and cycling-related activism have not been given their due.

Unlike most studies (except *Cycling Cities*), the present work broadens the chronological scope to long-term developments. While many studies only focus on the late nineteenth century or cycling’s revival since the 1970s,

90 Giseline Kuipers, “De fiets van Hare Majesteit: Over nationale habitus en sociologische vergelijking,” *Sociologie* 6, no. 3 (2010): 3–26; Giseline Kuipers, “The Rise and Decline of National Habitus: Dutch Cycling Culture and the Shaping of National Similarity,” *European Journal of Social Theory* 16, no. 1 (2013): 17–35.

this study looks at the crucial decades in between to explain the persistence and resilience of a large and vibrant cycling culture – the breeding ground for the cycling activism that in turn set off cycling’s urban revival in the Netherlands.

My argument is first that cycling in the Netherlands has received a larger space in traffic policy than in other countries, partly because interest groups and social movements played a greater governance role than elsewhere. This might be attributed to the Dutch polder model, a compromise and consensus-seeking political tradition. Second, I argue that national and provincial politicians and engineers have also been crucial at various times. The new archival material I explore corroborates and refines claims about the influence of social movements. Analyzing the political dynamics between governmental agencies and non-governmental organizations, as well as the role of social movements of cycling, is crucial to understanding the historical success of Dutch cycling as a daily practice. Where Albert de la Bruhèze and Veraart primarily studied how urban utilitarian cycling was governed, this study substantially broadens the perspective to show how different types of cycling (urban, suburban, interurban, and rural, as well as utilitarian and recreational) were shaped at different levels at different times. This also allows us to see how much of the cycling governance up to the 1970s ignored urban cycling. To do all this, we need to scour the archives for new sources.

## Locating Cycling Governance: Sources and Methods

Reconstructing the dual process of cycling advocacy and governance requires archival and published sources. For cycling advocacy, the main arguments are typically expressed in journals, newspapers, and if successful, end up in Parliament and other representative bodies. These published sources, as well as the records of Parliament form one important source. Second, the ensuing governance process, the implementation of cycling policies, involves negotiation between different state actors as well as between state and non-state actors. Correspondence between these groups as well as records of meetings allow us to observe this process up close. *Cycling Pathways* relies on extensive archival research, often in archives not earlier consulted, or not specifically focused on cycling policies.<sup>91</sup>

91 Citations from Dutch archival and policy documents have been translated into English by the author.

To trace the sources methodologically, the first step was to identify potentially relevant archives, given the scant previous research on provincial and national cycling politics. Using archive inventories, I located many documents in multiple Dutch archives, as shown in the full list in the bibliography. Given the focus on a variety of actors and their interaction, the main sources are institutional archives of national, provincial, and local public works departments, as well as those of non-governmental organizations like the ANWB and Cyclists' Union. In line with Dutch political traditions, these NGOs closely cooperated with governmental actors in state committees and through correspondence. The records of these meetings and letters between key actors provide valuable insight into their policy beliefs about cycling and cycling governance.

A main source of information was the Dutch National Archives (NA). This is where the records of Dutch ministries including Public Works are kept. Particularly useful were records of the Committee of Consultation on Roads. Given the consultation culture in the Netherlands, these committees with many different stakeholders, provide great insight into the considerations behind mobility and cycling policy. Provincial and municipal archives are also of the utmost importance. Given the tendency to assign cycling governance to lower levels of government, these archives contain a lot of material on the actual construction of cycling infrastructure. Provincial archives are a particularly rich source of information as provinces developed plans and often served as intermediaries between municipal and national government, trying to smoothen procedures and reduce friction. Municipal archives are the best place to find evidence of the street-by-street transformation of cities over the twentieth century – first into roads for cars, then after the 1970s into spaces where cyclists, pedestrians, and other non-motorized user groups regained some space. The archives of activist groups and social movements are in different locations. Those of the Cyclists' Union are at the International Institute of Social History (IISH), although regional archives have the information on local branches and *Dooievaar* (see Chapter 6). Other action groups or NGOs have their records at the IISH or the National Archives. The ANWB has its own extensive in-house archive, which I have also consulted.

Other sources are parliamentary documents and records.<sup>92</sup> Cycling featured regularly in Dutch parliament debates at various times. One such

92 Parliamentary documents are indicated with their official dossier numbers, parliamentary records as *Handelingen* [I or II for upper house/lower house, followed by parliamentary year, meeting number, date, page]. These records are digitized and accessible at <https://zoek.officielebekendmakingen.nl/uitgebreidzoeken/historisch>.

occasion was in the 1920s for creating road policies linked to the bicycle tax. The rising popularity of mopeds in the 1950s was another example. Since the 1970s, many politicians – and the social groups pushing them – have put pressure on the state to invest more in local cycling policies. Besides plenary meetings, MPs meet in smaller committees dedicated to specific topics with the minister and high officials. The Permanent Committee for Public Works (*Vaste Commissie voor Verkeer en Waterstaat*) is a great source for more in-depth discussions of political trade-offs in mobility policy than the plenary meetings and I use them extensively, particularly in Chapter 7.

Besides unpublished archive material, journals and newspapers are a key source of information. The ANWB's trade journals, leading in the field, contain many articles by top Dutch engineers. I have studied all the volumes of the ANWB's roadbuilding journal *Wegen* ("Roads," 1925-present) and its traffic engineering journal *Verkeerskunde* ("Traffic Engineering," published under different names since the early 1950s). While car infrastructure clearly dominates these journals, many pages are dedicated to cycling. In addition, I consulted the numerous Cyclists' Union journals, published nationally and by local branches. I have found many details otherwise lost in the archives through articles digitized in the unsurpassed national newspaper database Delpher. It contains some 120 million pages, including 15 million in newspapers from 1618 to 2005 (representing 15 percent of published newspapers), as well as hundreds of different magazines.

Semi-structured background interviews also played a significant role.<sup>93</sup> These were conducted between 2018 and 2020 with (former) activists, consultants, and engineers to gain new insights and triangulate archival findings.

I used the source material methodologically in a process akin to coding. While studying archival documents, I made extensive notes of documents and passages relevant to my research purposes, especially governance processes. My qualitative analysis did not involve software, but the material was marked according to categories, such as material pertaining to national, provincial, or local policymakers, non-governmental actors, or design norms, finances, and so on. The outcome of this analysis is a narrative that attempts to reconstruct the governance process behind Dutch cycling infrastructure. The thematic development "follows the actors," as in Actor-Network Theory. This means critically and reflexively constructing, but not replicating

93 Organized with Matthew Bruno and Leticia Lindenberg Lemos. See forthcoming article: "Mobility Protests in the Netherlands of the 1970s: Activism, Innovation, and Transitions," *Environmental Innovation and Societal Transitions*.

their interests and biases. The focus is therefore mainly on national and provincial politics. This approach is at odds with the dominant development in historical research, which increasingly values transnational narratives over national histories. In mobility history, the transnational circulation of roadbuilding expertise and lobbying are for instance well documented and crucial to understanding national road networks. The focus on cycling in international networks such as the road engineering association PIARC is much more limited. This research explores and tries to understand the unique Dutch cycling trajectory. While some transnational dimensions exist, comparative approaches, still adopting the nation as point of departure, can further clarify the Dutch case. However, as cycling history at the urban level is now reasonably well understood, the next step is to ask to what extent regional and national governance also impacted this local mode of transport, before extending even further to transnational developments. As this step has proven to be more than enough for one project, it is therefore practical to keep to the national level for the time being.

The book discusses the period between 1880 and 2020 in three sections. Part I covers 1880 to 1950, when the bicycle transformed from an elite recreational to a cheap mass utilitarian vehicle. Part II covers the crucial decades between 1950 and 1970, when cycling all but disappeared in many countries but remained quite firmly entrenched in the Netherlands. Part III covers the revival of urban cycling since the 1970s. Throughout, whenever possible, I make comparisons with cycling policies outside the Netherlands. The conclusions summarize the empirical findings in terms of the governance theories introduced here.

Chapter 1, “Citizen Power: From Bourgeois Clubs to Governance Ground-breakers” – like Chapter 6 – puts social actors at the forefront. The crucial role of non-governmental tourist organization ANWB in framing cycling as an all-Dutch activity and its subsequent lobbying for cycling infrastructure heralded the arrival of Dutch cycling culture. I use new material from the ANWB archives to corroborate – and nuance – the scholarship’s main conclusions far more extensively than elsewhere. As a system-builder, the ANWB established close ties to government agencies, coordinated private attempts at recreational cycling path construction, and lobbied to use the proceeds of the bicycle tax for constructing non-urban cycling infrastructure. This last aspect provided the reason for the national government to become more involved in cycling governance, as discussed in Chapter 2, “A Contested Compromise: National Government Supports Commuter Cycling.” The central principle of Dutch road engineering was traffic separation (between cars and bicycles) on major routes outside cities. This conviction existed to an



extent already around 1920, reinforced by the bicycle tax. Though the effect was unintentional, this tax boosted cycling infrastructure. Urban cycling was in mixed spaces, largely beyond the control of non-local policymakers. Two particular aspects of cycling governance here are new. First, using parliamentary records, I examined whether politicians considered cycling as contributing to ordinary Dutch citizens' mobility and quality of life. Second, using engineering committee records, I was able to determine how the political debate about cycling's status and the bicycle tax was translated into engineering norms and practices for cycling infrastructure.

After World War II, as Part II argues, two crucial decades followed in which the Dutch trajectory diverged from international trends. While the 1950s and 1960s saw the demise of cycling in other countries due to uncompromising pro-car policies, the Netherlands kept some space for bicycles. The chapters question how governance practices in the Netherlands enabled cycling infrastructure and cycling (engineering) knowledge to endure alongside growing car use. Chapters 4 and 5 primarily deal with utilitarian cycling outside the city, while Chapter 3, "A Right to Recreation: Provincial Policymakers Design Cycling Networks," focuses on recreational cycling infrastructure. Connected to the story about providing non-governmental recreational cycling infrastructure in the first chapter ("Citizen Power"), it discusses the growing provincial involvement in recreational cycling, another episode in Dutch cycling governance which has received little attention so far. At a time when policy attention centered on cars, it was an important area where cycling governance persisted. Chapter 4, "Popular or Outdated? National Policymakers' Ambivalence about Bicycles," then asks how the cycling policies initiated in the 1920s and implemented throughout the 1930s lived on in the 1950s and 1960s, seen in the scholarship as the period of car-centered planning. Path dependency is a key topic in this chapter. In Chapter 5, "An Accident of History: How Mopeds Boosted Dutch Cycling Infrastructure," a new vehicle enters the fray, the moped – fundamentally challenging the notion of traffic separation through separate infrastructures as well as the distinction between recreational and utilitarian cycling paths. Popular across Europe, its controversial classification as a type of bicycle meant it had to use existing Dutch cycling infrastructure. What were the consequences of this decision for Dutch cycling (infrastructure)?

Part III shifts to urban cycling governance. Since national and provincial policymakers and non-governmental actors rarely interfered in urban cycling before the 1970s, the earlier chapters in this book have less to say about urban cycling. With increasing pressure on this type of cycling due to rising automobility threatening historic city centers, and the growth of





new (urban) social movements, a new coalition emerged whose goal was to promote urban cycling again. The multi-level governance of this process, which activists played a significant role in shaping, is central to part III.

Chapter 6, “Citizen Expertise: Urban Activism Shapes Local Cycling Policy in the 1970s,” discusses the origins of these social movements and their action strategies. How did these groups function in dialogue with a relatively accessible civil service at city level? And how successful were user-developed and lay expertise methods in transforming city streets that had become exclusively car spaces? While Chapter 6 shows how citizens forced these developments on the government, Chapter 7, “Catching Up: The State Acknowledges Urban Cycling as Public Good, 1975-1990,” investigates in more detail how cycling policies responded and came about within a complex governmental bureaucracy. Consisting of multiple ministries as well as powerful local actors, the decentralized Dutch system created both opportunities and friction for politicians and engineers. Finally, Chapter 8, “Self-Evident: Mainstreaming Cycling Policy and Practice since 1990,” brings this long-term story to the present by summarizing the past thirty years of cycling governance. Providing a bird’s eye perspective on recent developments, placed in the context of a long time span of cycling governance, it completes our journey through more than a century of Dutch cycling policies and practices and connects the past to the present.



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# Part I

## Roots: How Commuter and Recreational Cycling Became a Dutch Public Good, 1880s-1940s



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Cycling was a highly popular activity throughout the industrializing world in the first half of the twentieth century, until its international trajectories diverged. Many cities, as historians Adri Albert de la Bruhèze and Frank Veraart show, set their sights on automobility and shunned cycling, thereby marginalizing urban cyclists in traffic policy.<sup>1</sup> These cyclists often formed a majority, yet had to give up their space to a minority of car drivers. This also occurred in the Netherlands, but a political compromise gave Dutch cyclists back some space in the form of separated cycling paths. Primarily serving suburban commuter cycling, cycling paths were strongly and enduringly embedded in policymaking. Although studies on road policies and the tourist organization ANWB illustrate Dutch engineers' and politicians' particular attention to non-urban cycling, both commuter and recreational, which resulted in a resilient cycling culture that survived the rise of the car after the 1950s, this commitment to providing infrastructure for some groups of cyclists is not yet fully understood; nor do we understand why it was stronger in the Netherlands than in other countries. Can alternative policies explain Dutch cycling's resilience and prominent role in mobility throughout the twentieth century?

Between the two world wars, a policy coalition of lobby groups and national engineers embedded cycling in Dutch politics and road standardization more forcefully than elsewhere. Non-governmental organizations played a significant role: for decades, citizen initiative was the sole driving force behind cycling governance. These citizen initiatives became intertwined with national and local government and remained relevant when state involvement in road policies grew after 1920. The first chapter shows how Dutch cycling clubs – like those elsewhere in the industrial world – were the first to initiate cycling policies. Supported by additional archival research, it brings together the existing scholarship on mobility and political science from a cycling advocacy perspective. An account of Dutch cycling policies would be incomplete and misleading without discussing their non-governmental origins. Uniquely, Dutch clubs retained a strong position, allowing them to find the middle ground between automobility and cycling practices in government policy.

1 Adri A. Albert de la Bruhèze and Frank Veraart, *Fietsverkeer in praktijk en beleid in de twintigste eeuw: overeenkomsten en verschillen in fietsgebruik in Amsterdam, Eindhoven, Enschede, Zuidoost-Limburg, Antwerpen, Manchester, Kopenhagen, Hannover en Basel* (Den Haag: Ministerie van Verkeer en Waterstaat, Directoraat-Generaal Rijkswaterstaat, Hoofdkantoor van de Waterstaat, Directie Kennis / Stichting Historie der Techniek, 1999).

To explain how Public Works engineers and lobbyists reached this compromise, typical of the Dutch political “polder model” culture, Chapter 2 discusses the Dutch national government’s involvement in cycling policy in the 1920s and 1930s. International research shows how many thousands of (working-class) cyclists in many countries battled with a small but exceedingly powerful group of upper-class car drivers with commercial interests, who were lobbying for car-centric traffic policies. The class-driven car coalition often marginalized cycling and made life harder for (working-class) cyclists. This political struggle had a different outcome in the Netherlands, not least because the Dutch (upper) middle class also kept on cycling. National politicians, engineers, and lobby groups reached a political compromise over bicycle taxation, initially to offset the national deficit, then diverted to build highways and cycling paths alongside national and provincial roads. Most road funding came from cyclists’ taxes. The cycling paths they got in return were a peace offering, a contingent development with long-lasting effects. The system of traffic separation still shapes Dutch infrastructure today. For much of the twentieth century, however, this cycling infrastructure typically ended at the city limits as provincial and national engineers had no authority within the urban built-up area. This traffic separation model created path dependencies shaping cycling infrastructure outside cities, and eventually, after the 1970s, within Dutch cities as well. From an international perspective, Dutch cycling politics found a compromise in the fight for road space and funding. Lobby groups played an important role in Dutch consensus-driven political culture and influenced this outcome.<sup>2</sup> The proportion of Dutch cyclists remained high because cars had their own road space, not obstructing or endangering cyclists.<sup>3</sup> This continuous commitment to an engineering model of traffic separation – and with it the building of separate cycling lanes – is one reason why cycling survived alongside car growth. By investigating the long-term consequences of this model and distinguishing the urban from the rural and suburban, I demonstrate the specific implementation of this traffic model in time and place by different stakeholders.

The political contest over cycling infrastructure took place in a context of dramatic changes in mobility. Internationally, first bicycles in the 1890s,

2 For intermediary groups’ role in diffusion of technologies: Adri A. Albert de la Bruhèze and Ruth Oldenziel, “Theorizing the Mediation Junction for Technology and Consumption,” in *Manufacturing Technology, Manufacturing Consumers: The Making of Dutch Consumer Society*, eds. Adri A. Albert de la Bruhèze and Ruth Oldenziel (Amsterdam: Aksant, 2009), 9–39.

3 Ibid., 17.

then cars in the 1950s, became increasingly affordable. And we should not overlook the role of public transit to explain why citizens did or did not opt for individual mobility modes like cycling. In Belgium, a well-developed network of local railways formed a powerful competitor for the bicycle, much more so than for their Dutch neighbors. Belgian workers had a mobility alternative to commute.<sup>4</sup> By contrast, in the Netherlands, the underdeveloped and expensive public transit along with the slow adoption of the car, the ANWB's cultural promotion of the bicycle, and the political status of (non-urban) cycling, explain why for many people the premier mobility option was the bicycle.

Cycling advocates may have touted the wide diffusion and use of bicycles already around 1900, but bicycles only gradually became a truly mass phenomenon. In 1899, only 2 percent of the Dutch population owned a bicycle,<sup>5</sup> before cycling spread socially in the next decade.<sup>6</sup> The ANWB, originally a cycling advocacy group, calculated that there was 1 bicycle for every 53 Dutch citizens in 1899, jumping to 13 in 1908, and 2 by 1940. The cheapest bicycles still cost a monthly median income in 1910, but cheap imports, competition, and increasing homegrown production made bicycles ever more affordable.<sup>7</sup>

Dutch bicycle ownership followed international trends at first. By contrast, the nation's car ownership – even when engineers and politicians claimed a spectacular future increase in car use and lobbied for a quick and comprehensive redesign of the road network – lagged behind other European countries. In 1930, only 9 in 1,000 citizens in the Netherlands had a car, fewer than in Switzerland and Belgium. In the 1930s, when German car ownership rose quickly from 8 to 30 cars per 1,000 residents, the increase in Dutch car ownership was modest, from 9 to 11 cars – even when compared to the rise

4 Greet de Block, David de Kool, and Bruno de Meulder, "Paradise Regained? Crossing Borders Between Planning Concepts in the Netherlands and Belgium (1830–2012)," in *Builders and Planners: A History of Land-Use and Infrastructure Planning in the Netherlands*, eds. Jos Arts et al. (Delft: Uitgeverij Eburon, 2016), 17–67.

5 Sue-Yen Tjong Tjin Tai, Frank Veraart, and Mila Davids, "How the Netherlands Became a Bicycle Nation: Users, Firms and Intermediaries, 1860–1940," *Business History* 57, no. 2 (2015): 265.

6 ANWB archive, inv. no. 1660. Dutch bicycle tax statistics (1899–1908) show 2-, 1-, and half-guilder tariffs, exemptions based on house rental values, and a greater number of lower categories, demonstrating that cycling was spreading to different classes. The lowest tax category increased by 775 percent, versus 387 percent for the middle and 165 percent for the full rate.

7 Tjong Tjin Tai, Veraart, and Davids, "How the Netherlands Became a Bicycle Nation," 268. In 1935, bicycles cost on average 30 guilders, half the price they were in 1922: J.B.D. Derksen and A. Rombouts, "The Demand for Bicycles in the Netherlands," *Econometrica* 5, no. 3 (1937): 299.

in another small country like Belgium (from 12 to 19).<sup>8</sup> Driving was obviously still a highly exclusive elite prerogative – despite the disproportional attention devoted to cars by engineers and the media. Cyclists were less fortunate. Still, in the first half of the twentieth century, Dutch national and provincial policymakers came to recognize cyclists' rights – largely for opportunistic reasons. The provision of cycling infrastructure, advocated for by the ANWB and justified by the bicycle tax, became solidly embedded in Dutch engineering norms, laying the groundwork for a path dependent process. In this first part, I set out to show how cycling put down roots between 1880 and 1950.

8 Ruud Filarski in cooperation with Gijs Mom, *Shaping Transport Policy: Two Centuries of Struggle between the Public and Private Sector: A Comparative Perspective* (The Hague: SDU Uitgevers, 2011), 91. They suggest one reason was the relatively high car tax.