



# Europe: A Century of Urban Cycling



Ruth Oldenziel and Adri Albert de la Bruhèze

For urban Europe, bicycle policy expertise has become big business. Cities seeking new businesses, tourists, and expats, now consider a vibrant cycling culture an index of health and prosperity. The shift marks a watershed. In the past, boosters presented automobility as the engine of urban economic growth and public health. Today cycling has assumed that role. Based on European practices, New York's mayor Bloomberg embraced cycling in his 2006 revitalization plan for sustainable economic growth after the 9/11 terrorist attack.<sup>1</sup> He was participating in an international movement that emerged in the 1990s, exchanging best practices to achieve livable and sustainable cities.<sup>2</sup>

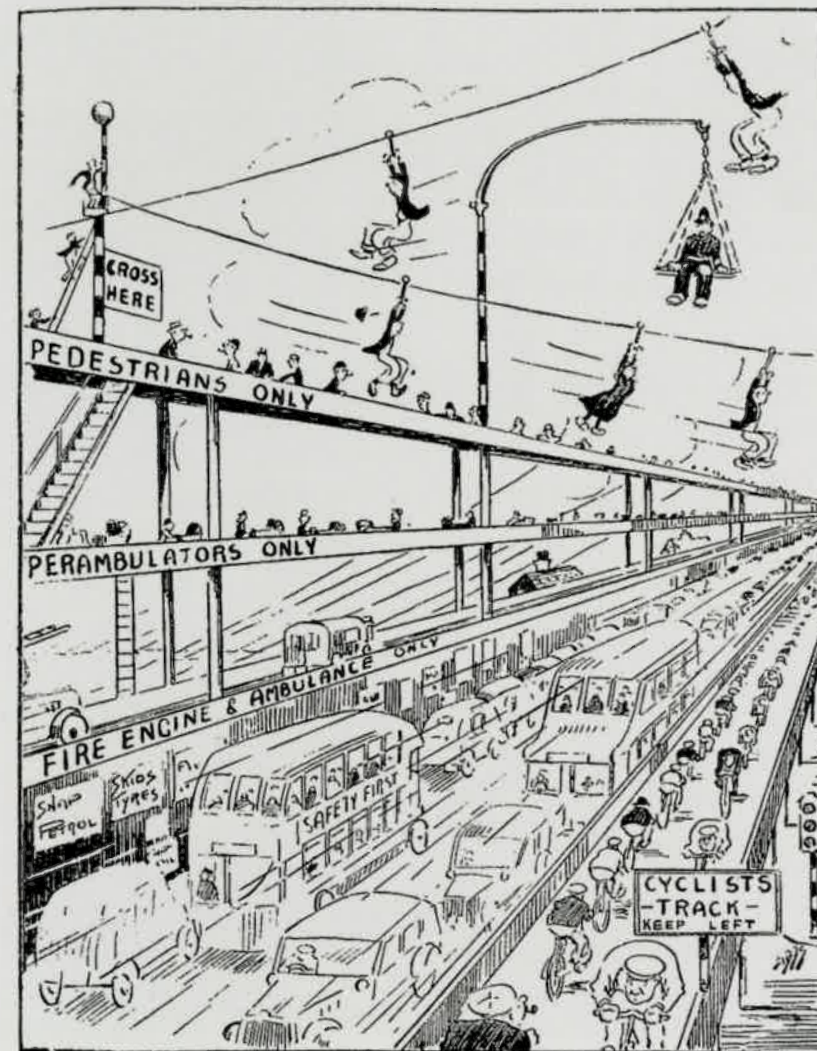
Recently, the World Health Organization (WHO) sought to calculate cycling's impact on employment and health in 57 cities. Its report argued that cities increasing their cycling share to Copenhagen's level would create 76 600 jobs—and avoid 10 000 deaths.<sup>3</sup> Promoting the benefits of urban cycling is also high on urban planners' mobility and environmental sustainability agendas, to solve the structural problems facing cities today. Many authorities are convinced that an effective cycling policy is good for their citizens. For policymakers at least, cycling policy is a key instrument for livable cities and healthy lives. Most are eager to show how cycling has improved their city. Copenhagen and Amsterdam serve as their role models.

## ☛ On foot? Bike, Tram, Bus, Car?

Throughout the twentieth century, cyclists competed with many other modes of transport. Since the 1920s, public transit has presented the greatest competition to the bicycle as the most affordable means of transport for the working class. And since the 1970s, cars have joined public transit as the greatest rival. In fact, cycling is less popular in cities with elaborate public-transit systems. In these 1950s photos of Budapest [top] and Hannover [bottom], the competition is quite evident.

This infatuation is a remarkable turn of events after decades of either policy neglect or even outright hostility. For over seventy years, policy makers, traffic engineers, and car boosters did everything in their power to get cyclists and pedestrians out of the way, believing that automobility would lead to a bright future. Given decades of hostile policy treatment, it is remarkable that bicycles never disappeared entirely from the streets of Europe. In some cities, people did shift from cycling to either public transit or the car, but in others, residents continued to use the bicycle





WE'LL ALL GO OUR OWN WAY HOME  
With a view to showing that "special paths for cyclists are the thin end of the wedge," the above amusing cartoon was published in the "Northampton Chronicle and Echo" after our successful meeting at Northampton. It is reproduced here by courtesy of the proprietors.

### Parodying Traffic Safety

Since its inception, the car's allure has been speed, driving *fast*. But how are other road users protected from faster-moving vehicles? In the interwar period and beyond, planners proposed Traffic Separation. Starting in the 1970s, the counterculture movement suggested slowing down traffic to make the streets safer—a strategy called Traffic Calming. This 1934 British cartoon, from the national cycling organization, mocks the idea of Traffic Separation. Notice the separate lane for baby carriages (perambulators) and the trapeze for pedestrians. In countries like Sweden, Traffic Separation still prevails. But in "cycling nations" like the Netherlands and Denmark, Traffic Calming challenges Traffic Separation.

for their business and commute. In over a hundred towns, the Dutch continued cycling on a daily basis to get around, even in periods when the authorities invested in public transit and automobility. Its cycling share of 26 percent is impressive compared to other European countries, prompting some to call the Netherlands a "bicycle nation." There have been other prominent cycling nations in the world, however. Under Mao, China acquired its reputation as the bicycle kingdom. Japan also boasts relatively high cycling numbers. And in Africa, cycling is a common alternative where public transit systems fail.<sup>4</sup>

Moreover, Dutch cycling—like Danish, German, British, Belgian, French, Swedish, Swiss, and Hungarian cycling for that matter—does not really exist. What does exist is a range of urban cycling cultures in hundreds of cities dotted around Europe. Each country has its own true cycling city, proud of its reputation. Each country has mixed car-cycling towns like Hannover and Eindhoven, with both respectable

cycling and entrenched automobility. Each country has cities with relatively extremely low levels of cycling like Rotterdam, or once thriving cycling centers that lost that status, like Lyon. Others have made a remarkable comeback like Antwerp. These large variations—within countries and over time—beg the question: how do we explain such local differences?

*Cycling Cities* shows at least five factors that explain why cycling thrived in some and languished in others. Urban development and alternative mobility options are important factors. So are traffic policy concepts, social movements' efficacy, and cycling's cultural status.

Yet, we offer a warning. There is no simple explanation—one factor that explains it all. Instead, we consider various key factors. We compare these factors across the cities. We also compare them across time. Some developments created so-called "path dependencies": patterns that once put in place,

policy cannot change with the stroke of a pen.<sup>5</sup> These long-term patterns show that history matters in understanding how change comes about. Such patterns also suggest how these factors are configured in different combinations over time.

*Cycling Cities* covers fourteen European cities to explain the remarkable differences in cycling practices

today from capital cities (Amsterdam, Copenhagen, Stockholm, and Budapest) to industrial centers (Basel, Lyon, Manchester, Antwerp, and Hannover) and company towns (Enschede, Eindhoven, Malmö, Heerlen, and Kerkrade) to answer the seemingly simple question. How can we explain today’s similarities and differences in cycling in these European cities over time?

## 1. Urban Landscape & Cycling Distances

A city’s physical landscape has an impact on whether urban cycling thrives. Its urban layout determines whether city planners, policymakers, and local residents find cycling a viable option. In the late nineteenth century, many people moved to cities to live, find work, do business, socialize, and debate. By the 1920s and 1930s, this urbanization process had a positive effect on cycling: it boomed in Europe’s streets. For many, cycling was the best and most affordable individual form of urban transit to commute, to shop, to deliver goods, and to have fun. Compared to walking, cycling meant a spectacular extension of people’s action radius.

An early form of suburbanization in the late nineteenth century, reinforced by commuter trains and interurban trams, resulted in people having to travel greater distances between home (working-class neighborhoods) and work (industrial sites). In this phase, commuting by bicycle thrived.

In the second wave of 1960s suburbanization, cars helped cities to expand even further beyond their boundaries, but caused traffic jams in city centers. This type of suburbanization had a negative effect on cycling. Since the 1990s, the trend has reversed. Young urban professionals have embraced urban living and cycling as a lifestyle. Compact city plans and re-urbanization have had a positive effect on urban cycling.



### 🚩 Protesting Fatal Accidents

From the moment cars hit the roads, the public has been shocked by fatal car accidents. By the late 1960s, automotive death rates had skyrocketed—and criticism had intensified. Starting in the 1970s, community and parent groups took up the cause. The Netherlands launched especially effective demonstrations. This 1983 photo depicts the “Stop Child Murder” (“Stop de Kindermoord”) campaign, with its improvised cemetery of white crosses. This campaign, staged in front of the automobile expo then at Amsterdam’s RAI convention center, forced the Dutch government to lower speed limits in residential neighborhoods.



## 2. Urban Alternatives to Cycling

Whether residents had access to mobility alternatives also shaped the outcome for cycling. After the 1920s, people in well-served European cities had access to public transit, yet many civil servants and workers found trams and buses expensive—particularly during economic depression, war-time devastation, and reconstruction. Expensive, underserved, or overcrowded public transit encouraged cycling. Some cities even developed tram systems to control people's movements and help cars and trucks cross the city quickly. Banning bicycles from certain streets was part of such policies.

Automobility also affected cycling in the post-war era. Before the 1950s, cars were a rarity and simply too expensive. Few motorists drove around the city. That did not prevent policy makers in some cities anticipating—and even prioritizing—cars in their plans. Cycling was crowded out when cities prioritized automobility, continued to invest in affordable public transit, or did both. Moreover, mopeds also presented a popular (motorized) alternative to cycling in hilly urban areas for a short period of three decades until 1980. Automobility marginalized cycling everywhere.

Although urban automobility increased sharply in absolute terms—and took up precious urban space—not so in relative terms. Moreover, when male breadwinners took the family car to commute to work, women, school kids, and others without access to a car relied on other modes of transit, including bicycles. In cities where expensive subway systems were postponed and cycling accepted as normal practice, cycling remained the most efficient transit alternative for many.

Since the 1990s, councils experimented with traffic calming and car-restriction schemes to revitalize their cities. Inspired by the environmental movement and urban activists' campaigns, investments in public transit, cycling, and walking combined with car-curbing policies have had the greatest positive impact in increasing urban cycling and overall livability.

## 3. Cycling as Traffic Policy

How politicians and opinion makers considered cycling also mattered. Were cyclists pests, who hindered the pace of motorists and annoyed pedestrians, or were they first-class citizens, who belonged on the streets and had equal rights? Such negative, neutral, and positive images of cyclists all shaped policies. In most post-war cities, policymakers focused on facilitating cars as the true vehicles of the future with little or no attention to accommodating cyclists or providing bicycle infrastructures, even if cyclists—and pedestrians—dominated their streets. In other cities, cycling's negative status also affected data collection. Authorities refused to spend money for gathering data on cyclists—or pedestrians for that matter. Traffic engineers, if they dealt with cyclists at all, developed traffic separation schemes like bicycle lanes to facilitate automobility and get cyclists out of the way. In the long run, this type of engineering marginalized cycling.

The 1960s counter cultural movement generated an alternative vision: in the 1970s and 1980s, they developed contra-expertise and demanded alternative solutions from authorities: traffic calming schemes to encourage cycling and walking. European cities

## 2. Urban Interventions to Cycling

Throughout the twentieth century, authorities performed vehicle counts to monitor their cities' increasing traffic. This 1947 photo from Malmö, Sweden, shows the people often hired to do the tedious job of counting: students. By merely calling for vehicle counts, authorities neglected pedestrian statistics and underestimated the number of public transit passengers.

Throughout the twentieth century, authorities performed vehicle counts to monitor their cities' increasing traffic. This 1947 photo from Malmö, Sweden, shows the people often hired to do the tedious job of counting: students. By merely calling for vehicle counts, authorities neglected pedestrian statistics and underestimated the number of public transit passengers.

Throughout the twentieth century, authorities performed vehicle counts to monitor their cities' increasing traffic. This 1947 photo from Malmö, Sweden, shows the people often hired to do the tedious job of counting: students. By merely calling for vehicle counts, authorities neglected pedestrian statistics and underestimated the number of public transit passengers.

Throughout the twentieth century, authorities performed vehicle counts to monitor their cities' increasing traffic. This 1947 photo from Malmö, Sweden, shows the people often hired to do the tedious job of counting: students. By merely calling for vehicle counts, authorities neglected pedestrian statistics and underestimated the number of public transit passengers.

## 3. Cycling as Traffic Policy

Throughout the twentieth century, authorities performed vehicle counts to monitor their cities' increasing traffic. This 1947 photo from Malmö, Sweden, shows the people often hired to do the tedious job of counting: students. By merely calling for vehicle counts, authorities neglected pedestrian statistics and underestimated the number of public transit passengers.

Throughout the twentieth century, authorities performed vehicle counts to monitor their cities' increasing traffic. This 1947 photo from Malmö, Sweden, shows the people often hired to do the tedious job of counting: students. By merely calling for vehicle counts, authorities neglected pedestrian statistics and underestimated the number of public transit passengers.

### Counting Vehicles, Ignoring Others

Throughout the twentieth century, authorities performed vehicle counts to monitor their cities' increasing traffic. This 1947 photo from Malmö, Sweden, shows the people often hired to do the tedious job of counting: students. By merely calling for vehicle counts, authorities neglected pedestrian statistics and underestimated the number of public transit passengers.



continue to implement both traffic separation and traffic calming principles. In some contexts, creating separate bicycle lanes has increased and encouraged urban cycling; in others, traffic calming schemes have boosted cycling spectacularly.

## 4. Social Movements & Impact

Social movements shaped cycling practice as well as policy. When middle- and working-class cyclists found cycling convenient and fast in the 1920s, the urban elites began to look on cycling as old-fashioned. They presented bicycles in the city as a dangerous form of poor people's urban transit that hindered motorists' speed. In the interwar period, and especially after the Second World War, opinion and policymakers began questioning urban cycling as a rational option to their proposed, car-centered, urban vision. This vision resulted in divestment of cycle paths, lanes, and tracks. It also challenged urban cyclists—and their organizations—as legitimate and further weakened their political power.

The late 1960s and early 1970s broad-based social movement—from progressive architects, critical engineers, environmental activists, and parent associations to urban intellectuals, cycling radicals, and countercultural activists—questioned the car-based urban vision. They opposed how cars clogged cities, polluted the air, and aggravated



traffic risks, instead offering the bikeable and walkable city as an alternative that put the urban environment, health, and livability center stage.<sup>7</sup> Since the 1990s, many former activists with an engineering and urban planning background have been able to provide their expertise when employed to develop alternative urban mobility plans.

## 5. Cycling's Cultural Status

The cultural status of bicycles and their riders also determines the viability of urban cycling. Cycling's status was based on a number of factors. In the 1920s, when workers and civil servants could afford bicycles for the first time, urban cycling's standing among the elites faltered. By the 1960s, bicycles—once the proud possession of the upper classes—were associated with poverty and the past; their riders with irresponsible, dangerous, and anarchist behavior. Cars were cast as the engines of economic growth and the way of the future, modernity, and individual freedom. The loss of bicycle's cultural status was detrimental to cycling policy. The reversal came in the 1970s. A broad-based movement enhanced cycling's cultural status as lifestyle choice for greener living. Since the 1990s, urban cycling has acquired also policy standing as the engine of growth and index of public health and sustainability. Most recently, urban cycling has also been a tool for city branding. Its new cultural position has boosted cycling policies in urban Europe and beyond.

Although these five factors help explain the levels of cycling in a city, they were configured differently over time. In some decades, cycling's cultural status had more impact; in others, traffic engineering ideas and a city's layout shaped the outcome.

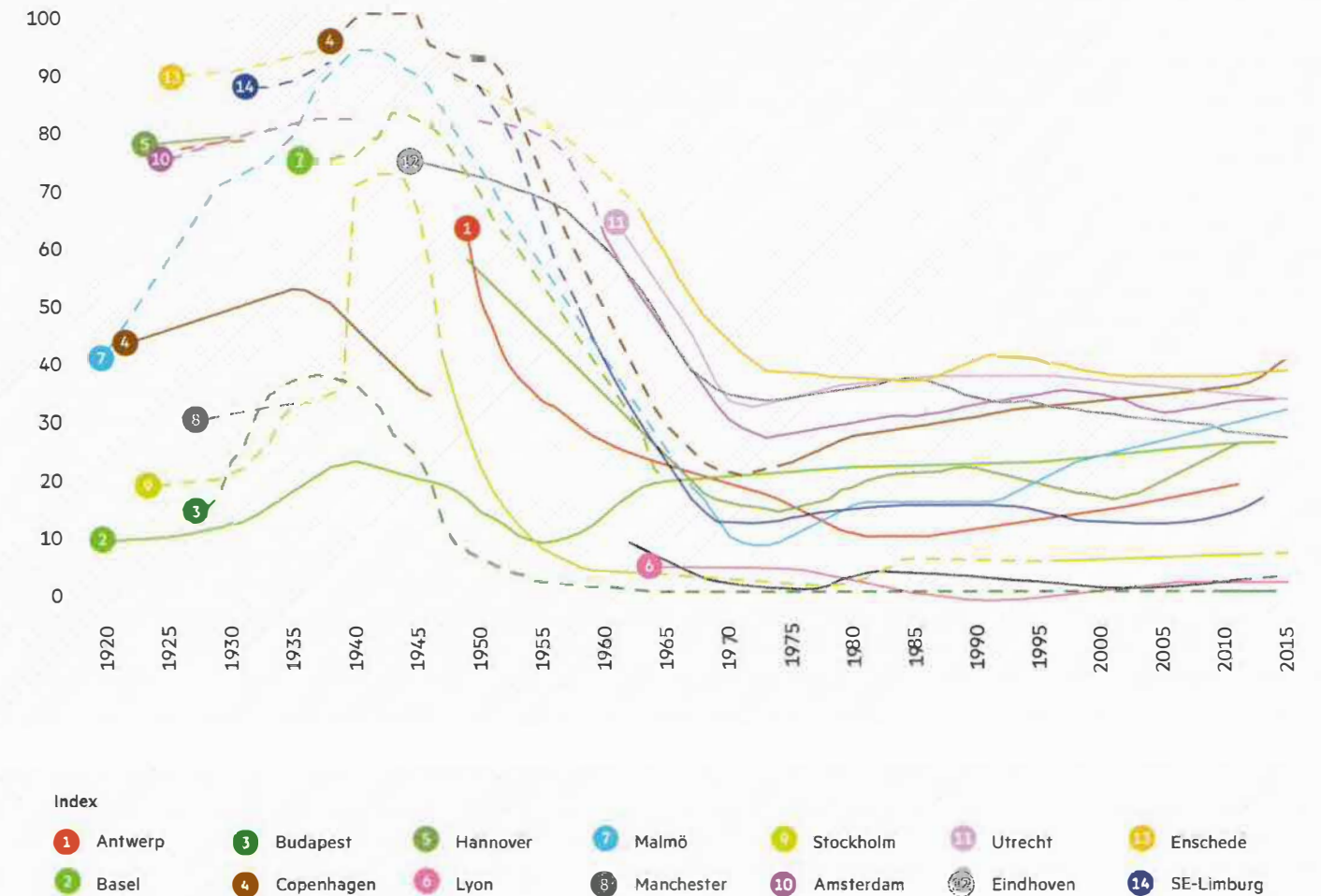
## Cycling through the Century

Over the course of a hundred years, each city experienced cycling levels that rose and declined, before stabilizing and growing again. Gathering cycling data proved to be quite challenging for reconstructing a general trend for each city since 1920. You would think that the further back in time we go, the less quantitative research data is available or that—even if such information exists—comparability poses the true problem. That may be true. Yet, we also discovered a remarkable lack of data after the 1970s, even when the social movement championing bicycling was taking off throughout the urban world. The lack was partly a result of automated counting methods committing cyclists and pedestrians as seemingly technical glitch in the system. The decision not to count cyclists was also a political one. Despite the general public and policymakers' booming interest in cycling

today, collecting relevant and systematic data has failed to keep up.<sup>8</sup> We have reconstructed cycling's overall trend over the last hundred years compared to other forms of urban transit based on model splits and traffic counts for each city:

Our comparative graph shows several similarities since 1920s. In all fourteen European cities, cycling stayed at a relatively high level until well into the 1950s and even early 1960s, before hitting rock bottom a decade later. At this nadir, activists took to the streets. Since then, cycling has regained some ground. Over the past twenty years, we see either stabilization or steady growth.

We also notice some differences. In the 1930s, people cycled daily in large numbers (60 percent) in all five Dutch cities, Antwerp, Hannover, Copenhagen, and Malmö. In Amsterdam, Utrecht, Eindhoven, and Enschede, large numbers of people kept on cycling longer than elsewhere. In other areas, the



decline came earlier and was steeper (mining region Southeast Limburg, Antwerp, Hannover, Stockholm, Basel, and Lyon). In Stockholm and Basel, the numbers began to dip below 40 percent even before the Second World War, while Manchester and Lyon hit rock bottom below 10 percent already by 1960.

The graph shows four periods: in the first, cycling levels were high (1920-1950); then they declined (1950-1975); stabilized and grew (1975-1995); and then increased again (1995-present). This is certainly what the figures tell us.<sup>9</sup> However, the trend line does not indicate how people experienced or practiced cycling.

A final word on the graph that has fascinated quite a few experts: by just looking at cycling trends in isolation, we see a simple story of cycling's boom, bust, and recovery.<sup>10</sup> But we can also interpret the graph in another way. Taking into account all the other forms of mobility (public transit, cars and mopeds), even during the rapid decline in cycling's share, the

sheer numbers of cyclists are mighty impressive by today's standards. For example, in 1960, cyclists in Copenhagen made up half of all the vehicles in traffic counts. In all Dutch cities except Southeast Limburg, 60 per cent or more of all the vehicles in traffic counts were bicycles. Cyclists in Hannover accounted for only 35 percent and in Antwerp 28 percent of the overall traffic. Today, most policy-makers would be proud if they could show off such a high proportion for cycling in their cities: these are still impressive figures.

No matter how we view the graph, the question is how to explain long-term trends and local differences in urban Europe. We present fourteen cities, explaining their trajectories in order to view why cycling declined in some, but thrived in others. Most importantly, their stories offer examples for cities today on how to develop their policies and embrace cycling practices to ensure a more sustainable urban future.

#### Trend Line Europe

Cycling's share of traffic (counts - dotted lines) and trips (travel surveys - solid lines) excluding pedestrians

Sources:  
see appendices,  
→ pages 201-229