A cycling city is created through trial and error

Marco te Brömmelstroet

European cities such as London, Paris and Munich are outdoing each other with plans for bicycle highways, under the motto ‘going Dutch’. But doesn’t this simplify things too much?

Cycling is increasingly being embraced as a crucial ingredient for sustainable mobility in European cities. The Dutch are often praised as an inspiring example. At first sight the simplicity of the bicycle is very appealing: it is a relatively simple means of transport that can serve a wide range of complex purposes. However, growing interest from various academic disciplines is increasingly revealing that this image ignores the mutual links between cycling and all kinds of social, cultural, economic and spatial processes. This raises important questions. Cycling requires more active attention and examination, not only in non-Dutch cities where cycling needs to grow beyond its marginal position, but also in the Dutch context. This chapter covers a number of striking connections. But first of all, let us examine why bicycles are seen as a partial solution to the classic mobility dilemma.

Mobility dilemma

Mobility can be defined as the possibility for moving people, goods or information. Professor of Transport Planning Luca Bertolini states that it creates a fundamental dilemma between the dependence on mobility and its negative effects.’ On the one hand it is a condition for economic development as well as civic engagement and social emancipation: it enables people and businesses to participate in activities relevant to them. But
on the other hand mobility is producing ever more visible negative effects: energy consumption, air pollution, noise pollution, fragmentation of landscapes and cities, lack of safety, use of space, etc. Consequently, urban mobility policy is increasingly a balancing act. Cycling seems to have the best credentials to date: it considerably increases the action radius compared to walking, without creating the aforementioned negative effects for society. What's more, cycling is often associated with a spectrum of bonus effects: major health benefits, broad accessibility and even increased interaction among people and between people and their surroundings. In turn, these effects are associated with social capital: with happy, socially equitable and fair towns and cities. It is perhaps no coincidence that cycling is a very popular activity in the Netherlands (27 percent of all journeys are made on the bicycle) and that, according to the United Nations, Dutch children are the happiest in the world.

‘The Dutch miracle’

So no wonder that cities increasingly aim to copy this success. The Dutch Cycling Embassy, a platform for Dutch bicycle expertise, states that it receives more than seventy inquiries a day. While Amsterdam alone received around 140 delegations in 2015. Cities that have put all their eggs in the car basket are now grinding to a standstill. Even successful public transport cities are finding themselves confronted with the limits of the system. They often seek inspiration from Dutch cities. But the quest for the Dutch recipe often leads to disappointment. The first myth to quickly bite the dust is that bicycles have always formed a key element of the mobility system in the Netherlands. It often comes as a huge surprise that fierce popular revolt and even urban warfare were needed to halt the rise of the automobile system around 1975. Moreover, the following four decades did not see an application of a clearly defined masterplan by an enlightened leader either. Even today the progress of the Dutch cycling system is chiefly the
sum of many small interventions by a large number of crucially important individuals. Just consider the recent and fierce debate about whether the passage under the Rijksmuseum should be reopened to cyclists.

Moreover, many important interventions were never directly intended to promote the use of bicycles. To give one example, the ‘peripheral retail facilities policy’, also known colloquially as the ‘hypermarket act’, ensured that the Netherlands was spared the global triumph of international shopping centre conglomerates. The resulting fine-meshed distribution of relatively small supermarkets proved to be an ideal environment for urban cycling. This is why cycling historian Professor Ruth Oldenziel has called our modern bicycle success an accident of history. The hope that remains for a policymaker in search of new approaches, following a visit to the Netherlands, is that a transition is possible but that there is no silver bullet to fall back on. It requires a consolidated series of small, context-sensitive interventions in various domains and over a longer period in order to move away at least partially from a high degree of automobile dependence. It is revealing here that a city like Amsterdam has only very recently issued its first policy plan on cycling, which is still largely responding to, instead of boosting, growth in cycling. True cycling policy is contained in many other policy domains. This brings us to the complexity of the seemingly simple cycling system.

Complex feedback

So what makes cycling so complex? Why it is not enough to simply create cycling paths in line with the famous Dutch standards? To understand this, we have to unravel so-called secondary and tertiary effects. As mentioned, cycling is linked to various urban processes. What makes things tricky is that these relationships are 1) often reciprocal, so that cycling is both a cause and an effect, 2) non-linear, meaning that small changes can have large
effects, and 3) mutually influencing, so that unexpected effects can occur. Below I illustrate this using two examples.

Mobility has reciprocal relationships with the spatial form of urban regions. Take for instance the example of the car. Its speed and freedom of movement allowed people to live far from the city and also made it attractive for amenities and employers to cluster in order to use economies of scale. Over time this mechanism led to an expanding urban structure in which distances between functions increased (secondary effect). In turn, these increased distances limited the mobility choices of individuals for linking relevant activities within a constant travel-time budget, as a result of which they increasingly had to rely on the car (tertiary effect). The same logic applies to cycling, although more in a more diffused way. In urban areas in the Netherlands where a majority of potential customers cycle (for instance the inner city of Amsterdam) it is more attractive for entrepreneurs to open and maintain multiple smaller branches. This is for instance reflected in the spatial structure of banks (and their cash machines), supermarkets, schools and day-care centres, which are thus able to serve as many people as possible (secondary effects). Because of this structure it is easier to link complex activities patterns of families by using the bicycle and increasingly hard for other modes (tertiary effect). This is further reinforced because families with a preference for cycling are increasingly choosing to settle in such urban areas.

The second example relates to the social and cultural status of cycling. In many countries bicycles are historically seen as poor man’s transport. In Germany and England, for instance, the bicycle was chiefly a means of getting workers to the factory more quickly. Something that is embraced on a broad scale by socialist parties, who saw an important emancipatory role. In the Netherlands the bicycle was absolutely not a negative status symbol. Indeed, the bicycle is widely supported because it is used by all strata of the population. In the Netherlands no one will look twice if they see a prime minister on a bike on his way to an audience with the king, who is also happy
to have his photo taken on a bike to emphasise that he is so ‘ordinary’. Giselinde Kuipers, Professor of Sociology, refers to this as ‘conspicuous non-consumption’. Because both the managing director and the cleaner cycle to work, this ‘national habit’ is further reinforced (secondary effect). Dutch television commercials, even those for cars, regularly use the bicycle as a vehicle for appealing to a large target group. In film classics such as *Turkish Delight*, the rogue hero played by Rutger Hauer becomes ‘extra Dutch’ because he mostly gets around by bike (notably, in a film sponsored by the British Leyland Group, an automotive conglomerate).

**The cycling challenge**

So it would seem that the success of cycling in the Netherlands is partly due to it having become a background issue. It is so mundane that we now hardly give it any conscious thought: you ‘just get your bike’ and off you go. But this is also the danger. Recent dynamics in the cycling system requires much more explicit attention. Firstly, the secondary and tertiary effects are creating places where cycling suddenly increases strongly, as in some town and city centres and especially to and from train stations. This raises new allocation issues: from space on the road to parking capacity and waiting times at traffic lights. Choices in these areas that were made years ago now need to be reconsidered in the light of new developments.

Secondly, there are also spatial and social processes that have a negative effect on cycling in the Netherlands. The spatial, cultural and social structure of, for instance, the western garden cities in Amsterdam is leading to a gradual decrease in cycling and an explosive increase in mopeds, especially among young people. This not only leads to noise nuisance, air pollution and increased subjective and objective lack of safety. It is also displacing the bicycle on cycling paths, and this in turn reinforces other self-reinforcing spatial and social processes.
that may be negative for the bicycle, such as location decisions by entrepreneurs and status (secondary effect). How should policymakers act or respond with respect to such developments? How can they prevent such a carefully developed cycling system from quickly disappearing again and prevent another ‘accident of history’?

Challenges being encountered outside the Netherlands chiefly involve the questions of how and where one can overcome self-reinforcing, automobile-dependent tendencies. Recent mobility data show that ever more cities are recognising that the tide is turning and that they actually already have a growing cycling culture. It is then necessary to transform these often strong subcultures into the mainstream. At the same time, physical measures need to be taken to discourage car use in the city and to offer cyclists safety and comfort: a package of ‘carrot and stick’ measures – such as parking charges (stick) and cycling paths (carrot) in places where this is possible – around spatial structures that encourage short journey distances. This means one should not begin with a cycle highway from nowhere to nowhere (automobile logic), but instead with something like safe junctions in the highly built-up inner city. Preferably close to train stations with high quality cycling parking facilities. Cities have the best chance of getting a cycling system off the ground if they aim for interaction with the regional public transport system. The public transport plus cycling system in the Netherlands shows that the synergistic qualities of this (a rapid and high capacity alongside a finely meshed and flexible capacity) can be very competitive in comparison with the automobile system. In fact, as shown by Roland Kager, each of the two systems would seem to be a prerequisite for the functioning of the other.

While the rest of Europe can learn from the Dutch experience in all its complexity, the Netherlands must not forget to continue further work on maintaining its success. Our famous swarms of cyclists are the result of a gradually evolved ecosystem that continues to evolve – but which also continues to remain vulnerable and easy to destroy.
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Further reading


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