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## Resumen

El objetivo de este artículo es explicar el proceso de motorización de la sociedad holandesa hasta la Segunda Guerra Mundial. En él se mantiene que las curvas de difusión agregadas que presentan las evidencias estadísticas recogidas sólo proporcionan una explicación parcial. Las particularidades del proceso de motorización neerlandés, dentro del contexto europeo, deberían explicarse utilizando curvas de difusión desagregadas, relativas a las diferentes culturas asociadas a los medios de transporte utilizados en Holanda así como de los diferentes períodos de tiempo y de uso. También se defiende que para explicar la motorización de masas que tuvo lugar en la posguerra es fundamental el análisis del período de entreguerras precedente. De ese modo, la motorización, en principio débil, que hasta el fin del período de entreguerras tuvo un carácter predominantemente estadounidense pero que fue adquiriendo poco a poco un estilo alemán, se explica refiriéndose a la difusión masiva de bicicletas y al carácter segmentado (desde el punto de vista religioso e ideológico) de la sociedad holandesa, que enfatiza el ocio colectivo y el turismo por encima de formas individualizadas de movilidad. Este artículo también contribuye a la historia general de la movilidad en dos aspectos: arguye que el lado recreativo de la movilidad ha sido mucho más importante de lo que se ha reconocido hasta ahora y que el caso holandés evidencia que el "modelo" estadounidense de motorización es sólo uno de los varios modelos posibles, aunque ciertamente de los más importantes.

**Palabras clave:** motorización holandesa; período de entreguerras; aspecto recreativo de la movilidad; uso del automóvil en Europa; turismo; americanización; bicicletas; segmentación.

## Abstract

This contribution tries to explain the motorisation of Dutch society until the Second World War. It argues that aggregate diffusion curves only provide a partial explanation and that the specificities of the Dutch motorisation process, set against a European background, should be explained on the basis of partial diffusion curves, related to subcultures of use and time periods. It also argues that to explain the post-war mass motorisation analysis of the preparatory Interbellum period is crucial. Thus, the initially weak motorisation, until the end of the Interbellum largely of an American character, but gradually turning to the German style, is explained by referring to the massive spread of bicycles and the 'pillarized' (religiously and ideologically segmented) character of Dutch society which emphasized collective leisure and tourism over individualized forms of mobility. In general, this contribution also adds to the general history of mobility in two respects: it argues that the pleasure side of mobility has been much more important than hitherto recognized, and the Dutch case provides evidence to suggest that the American 'model' of motorisation is only one (albeit a very important one) of several possible models.

**Key words:** Dutch motorisation; Interbellum; pleasure side of mobility; European automobility; tourism; Americanization; bicycles; pillarization.

Códigos JEL: N7 - C5 - D1

# Mobility for Pleasure; A Look at the Underside of Dutch Diffusion Curves (1920 – 1940)

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## 1. Introduction

In the 1930s, the Dutch historian Johan Huizinga (1872 – 1945) positioned the Netherlands 'on the Atlantic side. Our point of gravity lies on and over the seas. (...) In our Western-ness lies our force and our *raison d'être*'[1]. Although Huizinga hinted at the Dutch 'mentality' (*geestesmerk*, literally: character of mind), his assessment also seems to hold, to a large extent, for the way the Dutch motorized, not surpringly so if we realise that getting motorised is as much (if not more) a 'state of mind' as it is a form of 'utility maximisation'[2]. Seeing itself as a small country shaped around a large international harbour, and despite its highly regulated and 'pillarized' (segmented) internal political and social spectrum, the Netherlands always advocated liberalism, at least in its foreign relations[3]. And during the twentieth century, to find inspiration for this trade liberalism the country gazed in awe over the North Sea (to the United Kingdom) and over the Atlantic (to the United States) rather than towards the East, despite the direct influence of 'big neighbour' Germany[4].

To get a first grip on a country's motorisation, mostly an 'aggregate diffusion curve' is used, often 'normalized' (related to the number of inhabitants, or the

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1 Huizinga (1934), quoted in: Heldring (2006) (author's translation).

2 Cresswell (2001); see for a recent confirmation of this view within the realm of transport science: Anable (2005)

3 Boekestijn (1990).

4 For an overview of European transport policy, including the Dutch policy as part of an 'Anglo-Saxon school' as opposed to a continental European school, see: Stevens (2004).

**[32]**

country's surface and expressed as 'car density') to enable a comparison with other countries. In such a comparison, the Netherlands appear to be a slow follower of the American example in comparison to other European countries. From this traditional point of view, the 'mass motorisation explosion' during the 1950s and 1960s pushed the Netherlands into a small group of leading European countries, thus undertaking a 'catch-up' (figure 1)[5].

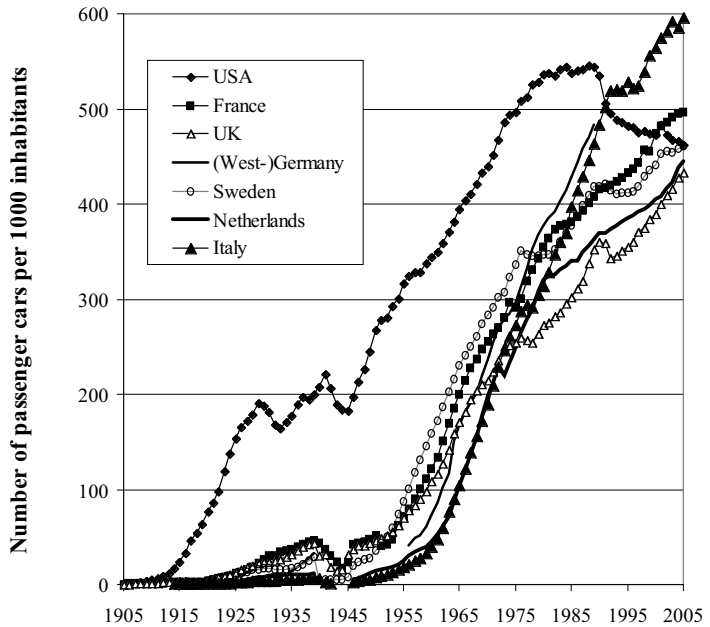


Figure 1. Passenger car densities in selected industrialised countries, 1905-2005.
Sources: **Number of vehicles (European countries)**: Mitchell, B. R., *International Historical Statistics Europe 1750-1993* (Vol. 4) (London/ New York: MacMillan Reference LTD/ Stockton Press 1998), complemented with other sources such as *World motor vehicle data*, American Automobile Manufacturers Association, 1997 (Germany, for 1956/7), *World Road Statistics* 1969, 1973, 1977, 1981, 1985, 1986, 1989, 1993, 1998, 2002 (for Germany, Italy and UK, in some of the years of the 1962-99 period), and other sources. For the last years (2000-2005): ACEA, *European Motor Vehicle Parc 2005*, for all the European countries except Italy and UK. Italy: data from Automobile Club d'Italia, Direzione Studi e Ricerche - Ufficio Statistica (1993-2005); UK: Department for Transport (1995-2005)
**Number of vehicles (USA)**: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics Series
**Population**: Mitchell (1998) and U.S. Census Bureau, International Data Base.

This contribution tries to develop another explanation, that the Dutch 'own path to automobility' is placed within a European context characterised by a type

5 Mom (forthcoming b).

of diffusion quite different from the American 'model'. For such an explanation, which does not deny the overwhelming influence on the contemporaries of the US as a 'model', the aggregate curve does not seem to work, for two reasons. First, comparisons at the aggregate level strengthen the questionable thesis, wide-spread among European and American transport historians alike, of a 'phase shift', a 'gap' between American and European motorisation. In this respect, historians tend to follow the mainstream ideology of the period, rather than looking at what motorists actually *did*. Second, this implicitly supports the even more questionable thesis of a largely 'homeostatic' process: once the curve starts moving upwards, any increase in income seems to push it along a predictable path of a 'logistic' pattern (called after the name of the mathematical equation), a rather deterministic point of view[6]. Instead, assuming that the post-war mobility explosion has its roots in the inter-war years[7], we need a much more detailed knowledge of the diffusion process, and we will focus our analysis upon this preparatory period of the Interbellum.

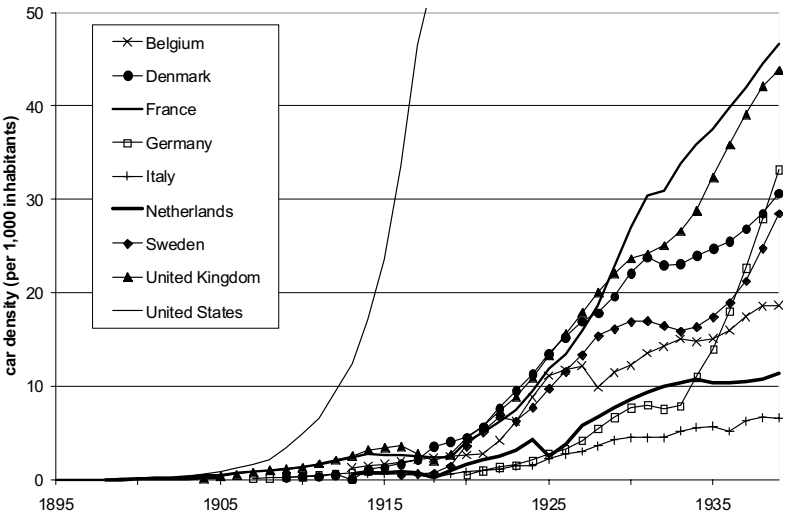


Figure 2. Passenger car densities in selected industrialised countries, 1895 – 1939.
Source: see figure 1.

During this period, large differences between the Netherlands and other European countries developed, not only vis-a-vis the large countries with their own car manufacturing industry such as France and the United Kingdom, but also

6 Marchetti (1983). See for a comparable analysis of the Spanish mass motorisation: Volti (September 2006).

7 Schot e.a. (1998) 31.

related to other small countries, both with a large domestic assembly industry (Belgium) and without such an industry (Switzerland, Denmark). The difference with Denmark is especially intriguing, since that country was an early European champion of motorisation, as figure 2 testifies.

Far from pretending to explain all these differences, as a first step this contribution tries to understand what was going on in the Netherlands, and in doing so tries to take the international context into account as far as historiography allows. To do this, we need much more detailed information. Ideally, such detailed curves should cover 'functions' (for instance: 'shopping by car', or 'visiting friends by motor cycle') rather than 'artifacts' or 'vehicles', and they should be so-called 'partial curves', either covering parts of the national surface (provinces, regions) or subgroups of users (youths, women, business men, etc.) to get a grip on the multi-faceted phenomena constituting a nation's motorisation[8].

Obviously, in most cases such detailed information is not available, but in this contribution at least some anecdotal evidence and some limited statistical time series are presented that allow to investigate the 'underside' of the aggregate diffusion curve, covering not just autos, but also pioneer users of bicycles, motorcycles and mopeds as well as buses. The importance of those societal groups at the fringes of the pool of potential adopters should be emphasised, because it is this 'underside' that drove the diffusion curve upwards, once it had been given its first impulse by elite automobile users and the upper middle-classes, who soon convinced many of their compatriots that there was something new worthy to be adopted[9].

This contribution first addresses the subcultures of bicycle, motorcycle and bus users (second and third section). A fourth section offers a first comparison with other countries, and tries to explain the Dutch market saturation with 'big light cars' during the 1930s. This is followed by a more detailed analysis of several user subcultures. Then, I propose an explanation on the basis of the Dutch general culture during the Interbellum. In the conclusions I try to answer the initial question of the Dutch 'motorisation path' during the Interbellum.

## 2. Partial diffusion curves and the motorcycle

In the Netherlands, as early as 1948, an explanation on the basis of partial curves and taking 'performance' (in passenger-kilometre) instead of vehicles as its

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8 For the importance of 'partial diffusion curves', either in time (indicating periods) or in function (indicating different subcultures) or region (indicating geographical differences within one country), see: Mom and Staal (2002).

9 The research on which this analysis is based has been funded by the Dutch Ministry of Traffic and Water Management, and will be published in full (in Dutch) in 2007: Mom and Filarski (forthcoming). See for a basic introduction into the diffusion theory, including concepts such as 'early adopters': Rogers (1995). I thank Hanna Wolf, Luísa Sousa and Sjoerd van der Wal for their help in getting the graphs right. I thank Clay McShane for his comments on an earlier version of this paper and for his willingness to help improve its English.

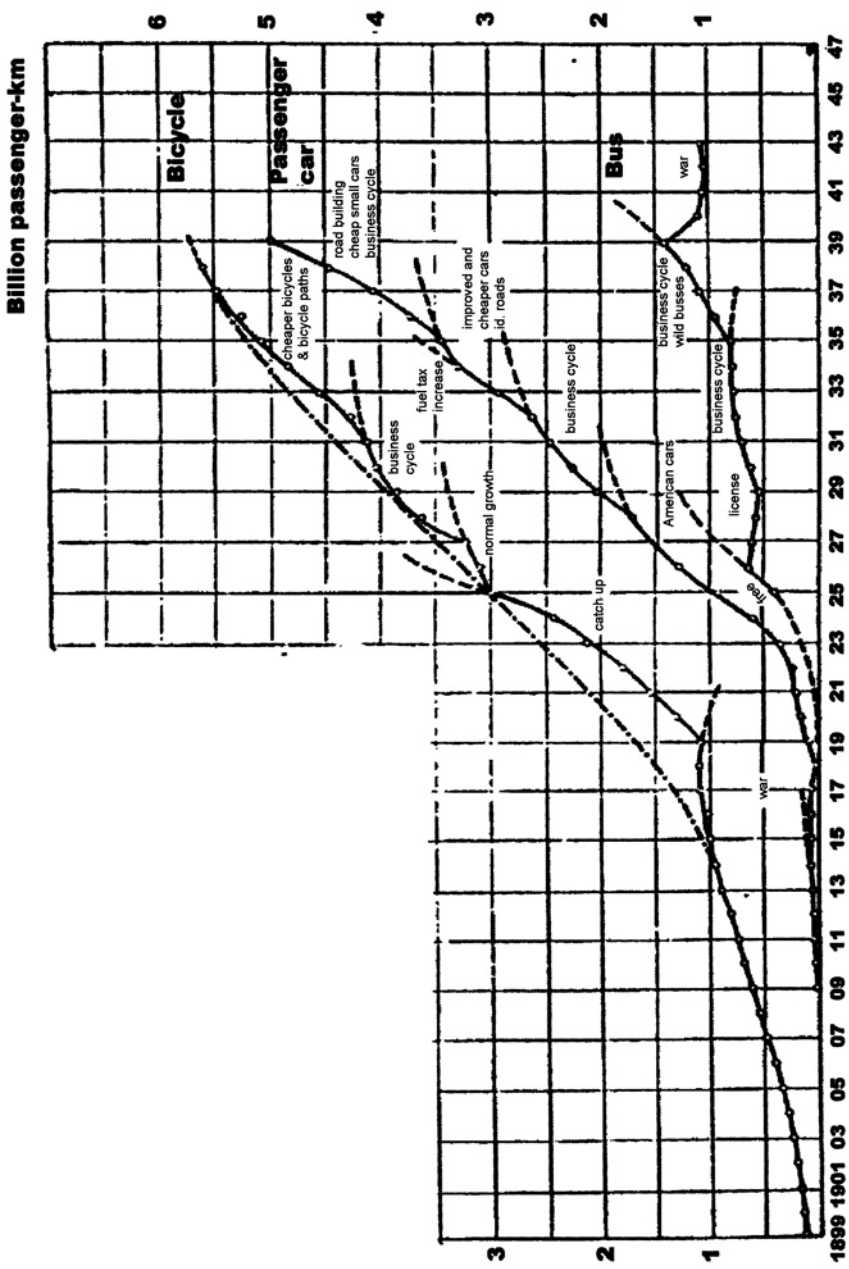


Figure 3. Aggregate diffusion curves consisting of partial curves and expressed in passenger-kilometre. Source: see note 10. Translation: this author.

unit of analysis, was published by a transport expert from the national railway company in the leading Dutch engineering magazine, well before Excel and SPSS were within reach of scholars (figure 3)[10]. Although it is easy to criticise this graph (because of the assumption of a constant car occupancy of 1.9 and an assumed average car mileage, both of which have later been criticised as too high[11]), it provides valuable insights into the constituting elements of the aggregate curve in a way that – to the knowledge of this author – is unique in Europe. Not only are the overall curves clearly consisting of partial curves, allowing for a periodization of the process in terms of new users per mobility mode, they also testify that until the end of the Interbellum the Netherlands were a country dominated by the bicycle.

And yet, motorisation during the Interbellum among the middle classes and even some well-paid groups within the working class did happen in the Netherlands. As far as motorisation through the acquisition of automobiles is concerned, it is remarkable that partial diffusion curves reveal that Dutch would-be motorists did not prefer the cheapest cars (at least in terms of purchase costs), even as far back as the pre-World War I years. Instead, they bought especially those cars that, according to the classification of the tax revenue statistics, were just above the lowest horse-power rating (figure 4).

Two possible (not mutually exclusive) explanations are proposed. First: automobile diffusion from its very beginnings was not the result of a 'rational choice' by a Dutch version of 'homo economicus', who was driven by a mere interest in decreasing purchase costs and, hence, would turn into an 'early adopter' as soon as his financial opportunity allowed. And second, those would-be motorists who could have afforded buying a cheaper car did not do so, but instead bought a motor cycle, following the example of several other European countries such as Germany and Great Britain. Why?

The answer to this question lies hidden in the annals of the Dutch motorcycle club. Hardly researched by historians of mobility, motorcycles were popular from the start of individual motorisation among those men who, out of necessity or pleasure, compensated the lack of an expensive chauffeur by a practice of sportiness and a willingness to tinker. Remarkably, in the Netherlands many medical doctors were among the earliest users of motor cycles, probably because they - and among them especially their colleagues from the countryside – could not afford to buy and maintain a car[12]. Letters to the trade journals of the day testify

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10 De Graaff (1948).

11 Staal (2003) 32. However, Staal's argument that in Amsterdam the average occupancy had been established at around 1.3 does not hold, because of the large share of motoring for tourism purposes *outside* of the large towns, which was largely a family affair; nor can the later estimate of an average mileage of 15,000 km be taken seriously, as I will show later in this contribution. Until new evidence suggests otherwise, I consider the analysis of De Graaff as the best available and not yet really challenged. See, however, further down for a correction of De Graaff's bus curve.

12 Mertens (1905); H.v.B.F. (1906); 'Het Motorrijwiel ten dienste van den Medicus' (1906). In 1910, 22 of the 300 members of the motorcycle association NMV were medical doctors. *100 jaar KNMV* (2004), 9.

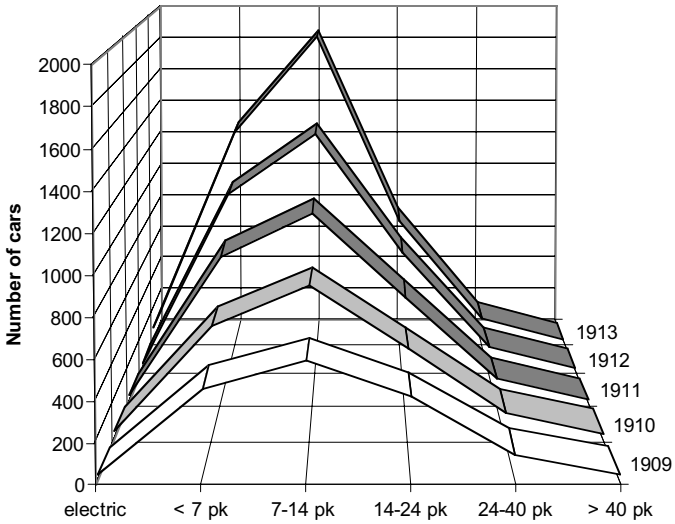


Figure 4. Dutch passenger car registrations according to tax category, 1909-1913. Source: Gijs Mom, *Geschiedenis van de auto van morgen; Cultuur en techniek van de elektrische auto* (Deventer: Kluwer, 1997) 209.
pk = Dutch (tax) horsepower.

that they introduced a combined functionality: during the week they used their vehicle to visit patients, but in the evenings, during weekends and holidays they indulged in a frivolous pastime, either alone or (equipping their vehicle with a side-car) with their family. Thus, they combined elements of the earliest, 'adventurous' mobility culture of the elite with some form of practicality, a phenomenon I have called 'functional layering': while in the process of diffusion artifacts get substituted by newer ones (thus keeping the interest of would-be buyers alive), functions do not easily get substituted, but they are usually 'enriched' with new ones. So, if diffusion is an evolutionary process, incremental change is to be found in the functionality of the artifacts rather than in the artefacts themselves[13].

Despite some resistance to motorcycle use, because they did not wish to visit their patients with dirty hands, medical doctors were especially prone to act as early adopters because of their apparent willingness to tinker on an inherently unreliable technology, a willingness which can be explained on the basis of their professional experience (including tinkering) with fine-mechanical technology. Both their individualistic professional ethics and their daily practice of experimenting with medical equipment (especially in the countryside) made these men especially prone to become early users of such an imperfect technology. This suggests that we should be careful about allocating motorcycles to a different market

[13] Mom (2001); Mom (forthcoming a).

than passenger cars on the basis of income or purchasing power: some preliminary research in the statistical correlation between car and motorcycle ownership and income during the Interbellum suggests that there existed no such clear-cut correlation, which would mean that both types of vehicles were chosen for other reasons, for instance because they afforded different user cultures[14]. From this perspective, the motorcycle is not so much (or in any case: not only) a 'step-up vehicle' for the car (as a rather deterministic reading of early motorisation wants to have it), but the expression of a continued 'adventurous' user culture which threatened to get lost by a gradual social and technical 'domestication' of the passenger car. While the more well-to-do fled to the balloon or other forms of aviation, others chose the motorcycle.

This can be substantiated by a closer analysis of the early motorcycle user culture. A 'sporty' group within this culture founded the Dutch Motor Cycle Association NMV (later the Royal KNMV), which separated itself from the Dutch automobile club NAC (later the Royal KNAC) before the war, and after the war formed a constant entrance gate for young Dutchmen to motorisation. The history of KNMV during the Interbellum testifies how this association, not readily accepted by the Dutch authorities because of its 'vulgar' love for speed, risk, and the fun parts of life, got involved in fierce internal debates between a group favouring 'bourgeois tourism' and a group willing to continue risking life and limbs in a sporting subculture of races and rallies. Representing only about ten percent of all Dutch motorcyclists (much more, by the way, than the one percent of bicyclists represented by the Dutch touring club ANWB), KNMV's membership was characterized by a low loyalty to the association as new young members entered while older members left. It is not hard to guess that these older members had meanwhile developed the wish (or acquired the income) to buy a car, and if they did, they strengthened the adventurous fringes of the group of car owners. Only in 1935, when the KNMV decided to lower its fees considerably did the membership more than double (to 4,000) within a couple of years. Remarkably, early road censuses hardly showed the presence of these motorcycle users on the Dutch national roads.

Before we try to explain this, another remarkable phenomenon of the Dutch motorcycle culture during the Interbellum should be highlighted. From the beginning of the 1930s a new, light motorcycle type of less than 60 kg became increasingly popular, so much so that by the end of the decade 66,000 of these vehicles were counted, two thirds of the number of automobiles. Unlike automobiles or motorcycles, most of these early examples of post-war 'mopeds' (bicycles with a small auxiliary engine) were manufactured in the Netherlands[15]. Many of their users were former bicyclists. Like the heavier motor cycles, however, these light motor cycles also didn't show up in the traffic counts. It is therefore reasonable to conclude that the heavier motorcycles were mainly used for sporting purposes,

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14 Roose (2003).

15 Stisser (1938) 374.

and hence did not show up in the censuses, a conclusion which can be supported by anecdotal evidence from the KNMV's journal, which dedicated a lot of space to local, regional and national races, rallies, endurance and other types of sporting meets[16]. Thus, the assumption by later historians that motorised mobility went from an 'adventurous' to an 'utilitarian' phase is not correct: would-be car buyers 'delegated' the most extreme aspects of the adventurous car culture to the motorcyclists, where it was continued ever since, as can be testified by the initiative, in 1925, of the now world-famous TT motorcycle races in the town of Assen, in the eastern province of Drenthe. Early radio made the TT races soon into a national event, which after the Second World War became notorious because it provided an annual centre of public sex, drink and drugs for tens of thousands of youths[17].

The lighter motorcycles, we may assume, were bought mainly by those who had used their bicycle to commute to work. If this conclusion is correct, then the light motorcyclists were the first in the Netherlands to introduce a new function of individually-motorized mobility: the short urban or peri-urban trip to work. This, too, would explain why these vehicles did not show up in the traffic counts, as these counts were executed along the through roads outside of the towns.

### 3. The motor bus as the poor man's car

Another part of the large reservoir of potential car users were those Dutch who could not even afford a motorcycle, but started to become 'streetwise' through early bus use. Motor buses in the Netherlands experienced an unprecedented boom during the 1920s. Despite Dutch neutrality during the war, thousands of young men had learned to drive trucks during their military service. Many of these drove the earliest post-war trucks, cheaply bought from Allied war surpluses and adapted for passenger transport. Soon, these were superseded by TT Fords (the mechanically strengthened version of the model T) and, after 1927, AA Fords that were re-equipped with a bus body by a growing national industry. Until 1926 these 'wild' buses were not hindered by any regulation. Road censuses during the 1920s indicate that the increase in 'intensity of use' (expressed in number of vehicles passing counting points of the road census) was by far the highest for the bus, higher even than that for bicycles. In the 1930s, if looked upon from an aggregate diffusion point of view, the growth of the Dutch bus fleet seemed to stagnate (an opinion also expressed in De Graaff's diffusion graph of figure 3), but from a user point of view something quite different happened (another reason why focusing upon the artifacts instead of their 'performance' can easily be misleading). Whereas the number of units only grew modestly, the capacity of the units as well as their trip capacity kept increasing, even during the depression (this apparently has not been taken into account in figure 3). Not only did the seating capacity steadily increase, also the effective schedule speed kept increasing, through the

16 Mom and Filarski (forthcoming).

17 Harmsze (1979).

introduction of stronger engines as well as four wheel brakes. In fact, the bus was the vehicle where the diesel engine was introduced on a much more massive scale than was the case for trucks[18].

During the 'coordination crisis', which dominated the national mobility debates in the industrialised countries during the entire interbellum, the government tried to protect its interests in the railways (and those of the regional and local governments in their tramway systems). In 1926 a regulation prohibited outright competition with tramway companies by buses, forcing bus operators to acquire a license if they wanted to start a scheduled service. But because the licenses had to be requested at the provincial level, often the interests of the national railways and the municipal tramways were bypassed, so much so that hundreds of bus routes mushroomed, especially in the northern provinces[19].

The regulation of 1926 could not stem the tide of the 'wild buses' either, for two reasons. First, illegal regular services kept being offered, because bus users were willing to support operators and drivers in unexpected ways. For instance, passengers of illegal line buses were willing to sign a document declaring that they were enjoying an 'excursion' (which was excepted from the 1926 regulation). And if that didn't help, passengers were, according to an eyewitness, prepared 'to "duck" for a while, either by laying down flat-belly between the seats or, if possible, even to climb in the luggage nets, because the driver had spotted a police officer along the road'. Only in 1935 was the first 'long-range' regular bus service introduced in the Netherlands between Amsterdam and Rotterdam, a distance of 60 km. Nevertheless, whereas the total number of trips in the Dutch public transport sector remained more or less constant during these years, the share of motor bus trips during the 1930s increased from 5 to 31 %, indicating a direct substitution for tramway use. Because of the capacity increase in the bus system the growth of the number of bus users was even more spectacular, from 10 million in 1924 to 154 in 1939[20]. In other words, buses helped lure tramway users towards 'road experience', expanding the societal base of the road lobby considerably. As we have seen, this road experience took on a special flavour, however. One of the bus inspectors remembered that 'we then were living in a time that sportiness was a more powerful inspiration for several bus operators than their wallet'[21].

Secondly, and ironically, the 1926 regulation forced outlaw bus operators into long-range irregular tourism trips. To this end a Dutch bus (body) manufacturing industry emerged, first copying the American touring car concept, and then developing designs of their own. One of the larger operators, VIOS in the small town of Wateringen, had a fleet of 70 touring cars that only were used during the sum-

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18 Grunveld (1987); Blauw (2004).

19 Jongma (1992); Stieltjes (1933) 545-565.

20 PH (1940) 593; Jongma (1992) 113; WEGEN (1936). This growth factor of more than 15 is not reflected in De Graaff's bus curve in figure 3. The curve should, from 1925, run more or less parallel to the passenger car curve and end around 3 billion passenger-km in 1939, assuming that the trip length per passenger didn't decrease spectacularly.

21 'Een vergeten jubileum der autobuskeuring' (1941) 38.

mer months, and then 'produced' annual mileages of 15,000 to 19,000 km per vehicle.[22] From the beginning of the 1930s, an international bus tourism developed. In 1935, the year of the World Fair in Brussels, organised touring car trips were scheduled towards Luxemburg, Germany, France, Spain, Switzerland, Austria, Hungary, Italy and 'even' (because of the obligation to use the ferry) England. At that moment 2500 of the 4000 buses in use in the Netherlands were outlaws or took part in tourism. In other words: as late as the mid-1930s the 'adventurous' use still dominated the Dutch bus mobility culture. Shortly before the outbreak of the war, international 'folk tourism by bus' (as the ANWB called it in a condescending way) reached its zenith; at that time regular services existed to Sweden, Germany, France and Switzerland. This type of bus use was dominated by inhabitants of Amsterdam, and in general, tourist bus companies were located in the big cities (whereas the companies of regular short-range use were located in the smaller cities and villages). To counteract competition among themselves these operators founded a Central Office for the Promotion of Touring Car Travel (CEBUTO) in 1933, which organized 'merry evenings' during the winter months, where 'songs at the piano' were played and 'a chorus of cooperating drivers' sang, and movies were shown about far away countries[23].

## 4. Partial diffusion curves and market saturation with 'big light cars'

Automotive historiography has not invested much energy in investigating the underside of the automobile's diffusion curve represented by former motor cyclists and bus users[24]. For instance: the motorcycle is neglected by De Graaff in his graph (see figure 3). And yet, looking into the culture of these forgotten would-be car drivers could lead to a shift of appreciation of a country's motorisation process.

This is certainly the case for the Netherlands, with its rather late industrialisation, its early emphasis on the tertiary economic sector (banking, transport, services in general) and its lack of a domestic automobile industry. Although an aristocracy and very wealthy bourgeoisie played a less pronounced societal role than was the case in Germany, the United Kingdom, or France, a middle-class, consisting of medical doctors, lawyers, the military, banking employees, teachers and shop owners (to name only the most important candidates for early motorisation) had been clearly in the making since the last quarter of the nineteenth century[25].

This may have been the reason, why the Dutch automobile club (K)NAC did not grow into the major representative of the country's automobile culture, as was the case in the UK and France. Instead, the institutional expression of the Dutch

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22 J.A.C.Q. (1939).

23 H.T. (1933); Kwak (1936); Autobusondernemer (1936); 'CEBUTO' (1933); H.T. (1935); quotations: M. (1942) 618; Kuin and Keuning (1952) 133.

24 See, for a recent exception (based on the diffusion theory of Rogers: Braun and Panzer (2003).

25 Van Zanden (1997); Thurkow (1983); Knippenberg and de Pater (1988).

mobility culture during the early 1900s followed the Italian path, with a very strong touring club founded in the 1880s as a bicycle club who managed to attract the majority of car owners as soon as motorisation started in earnest. Two aspects characterised the Dutch touring club ANWB's early 'policy': an openness towards the automobile (the British cyclist's club CTC, for instance, fiercely opposed the coming of the car and lost the battle for dominance to the automobile club RAC), and a reluctance to support manifestations of the 'speed craze' among the early automobile elite.[26] This can be explained by the tradition of the ANWB, which witnessed, during its initial growth into a modern mass organisation, a change in the bicycle user culture from a sporting culture (racing and touring, mostly displayed by the very young) into a culture which integrated the bicycle into the daily mobility patterns, including the trip to and from work and the use of the bicycle for the transport of light freight. As early as 1908, when the first signs of a saturation of the luxury car market swept across Europe (and in many countries the annual national car exhibitions were suspended for some years), the ANWB already expressed its disappointment about the car having 'degenerated' into an expensive luxury toy, often more than two tons in weight, while thousands of medical doctors and shop owners were longing for a useful vehicle.[27] Although the touring club had a lot of criticism on the quality and the simplicity of the Ford Model T, it soon realised that such cars would form the basis of the potential motorisation of the middle-classes, which it aimed to represent. Shortly after the First World War, the Dutch touring club boasted that it counted most of the Dutch motorists among its members[28].

It was during the Interbellum that ANWB grew into the crucial societal factor in mobility matters which it remained until nearly the end of the century. During this period, it managed to maneuvre itself close to the central government as an advisor on the topic of the reconstruction of the existing road network, and in order to do so, it systematically downplayed the luxurious, sporting and fun character of the car. The touring club surfed, in this period, on a first wave of massive motorisation, at the same time shaping it and being shaped by it. During the first two years after the war, passenger motor vehicle registrations (passenger cars and motorcycles) doubled, a wave which, after a dip during the recession of 1922, continued through the remainder of the 1920s[29]. During the first seven years after the war the increase in the motor cycle count was even more spectacular, because large quantities of 'big twins' (heavy Harley-Davidson's and Indian's) were sold by the American military forces and because foreign motorcycle factories could deliver immediately, whereas most car factories were still readjusting to peacetime production. The British motor cycle industry, which grew into the world's

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26 Mom, Staal and Schot (1997).

27 See for a comparable criticism by the French Touring Club on early car technology: Bertho Lavenir (1999).

28 Staal (2003) passim; Mom and Filarski (forthcoming); Linders – Rooijendijk (1989); de Jong (1968).

29 Staal (2003) 35, 71-82.

largest during these years, delivered many light-weight two-stroke motorcycles to the Dutch market and it was only around 1925 (at a moment the Dutch national statistics bureau was reorganizing, so data are lacking for these years) that the motorcycle was overtaken, in terms of vehicle density, by the car (figure 5)[30].

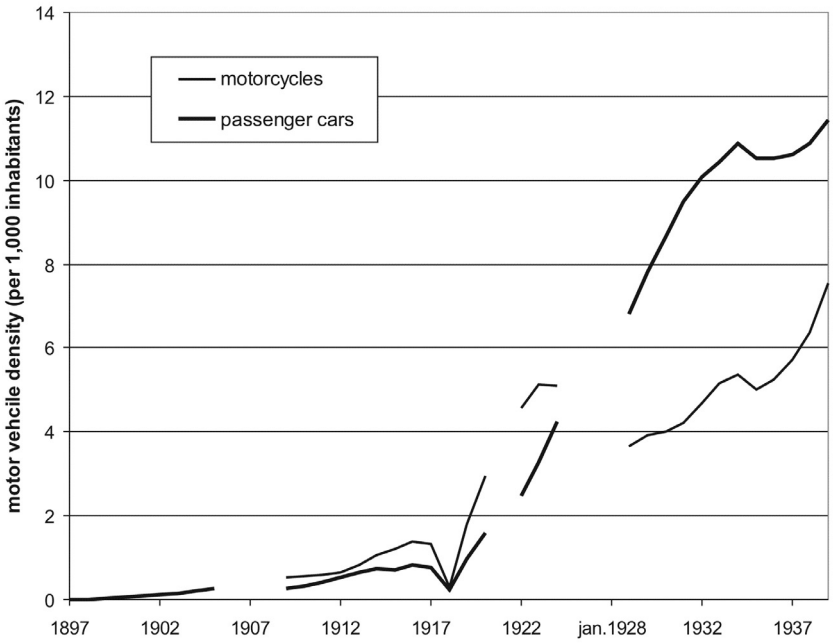


Figure 5. Passenger car and motorcycle densities in the Netherlands, 1916-1939 (Source: CBS; no data for 1925-1927)

The same thing happened in the UK, but in devastated Germany the motorcycle dominated until the beginning of the 1930s, when more than half of all motorised vehicles were motorcycles, many of them used by the proletarian class[31]. However, in the United States this vehicle type hardly played a role of any significance.

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30 P.M.S.N. (1931). Of the Harley-Davidson, with side-car and double seat, the Americans imported 80,000 during the war. As late as 1935, about 35,000 of these were still in use all over Europe. J.R. (1935).

31 Braun and Panzer (2003); Fraunholz (2002) 40-41.

**[44]**

The forces driving this process were primarily economic. First, the price of new cars was considerably lowered, on average to one-third of what was customary before the war, a result of mass and series production introduced in the manufacturing industry. In 1930, 85 % of Dutch passenger cars were 'light cars', as opposed to the very heavy French and German models in which the pre-war motoring elite enjoyed their 'adventurous culture'. A second factor considerably lowering the motorisation threshold was the principle of sales on credit. In 1924 the first credit companies appeared at the annual car exhibition in Amsterdam. If the American consul in the Netherlands was right, by the end of the 1920s 60% of all cars in the Netherlands were bought on credit (he may have exaggerated a bit, because in 1939 the share of car buying on credit was about one-third)[32]. A third important factor was the breakthrough, on a massive scale, of a second hand market, as the first car auction in The Hague in 1920 testifies, as well as comparable initiatives in Amsterdam and several smaller towns two years later; the Amsterdam auction was held every month in 1926[33]. The road censuses (after the ones in 1908 and 1916 held every third year since 1923) showed that the average number of cars per day per road (counted on 85 roads) had increased between 1916 and 1929 by a factor of 25, more than the growth factor of 20 of registrations, indicating an increase in number and length of trips. Motor cycle use increased too, but much less (a factor of 5), a remarkable contrast with the spectacular increase in units and indicative of a different user culture. Car use intensified also during the 1930s, which can be derived from the fact that the consumption of tires and gasoline increased more than registrations[34].

A contemporary German analysis of the Dutch car market estimated that by 1935 the market was saturated: whoever from the rapidly growing middle-classes wished to buy a car, had already done so.[35] But the *opportunity* to motorize is not enough to explain this first massive wave: there also has to be developed a wish, an expectation that purchase of a car would largely expand one's spatial potential in modern society. Figure 6, taken from this market analysis, convincingly shows the development of such a wish: while the number of would-be buyers (estimated on the basis of income tax statistics) decreased during the recession, registrations continued to expand, which can only be explained by a shift in household budgets reflecting a change in consumption preferences[36].

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32 *Motor-vehicle taxation* (1927); De Jong (1968) 55; Kuin and Keuning (1952) 65.

33 'Eerste Nederlandsche Automarkt Onderneming Rotterdam' (1922); 'De tweede auto- en motorverkoop op het Veemarktterrein te Rotterdam' (1922); J.C.E.S. (1922); advertisement (1926).

34 *Verslag* (1931) 30.

35 Stisser (1938). Stisser predicted a revival of purchasing power after the depression, resulting in a car park of 155,000 by the end of the decade. In reality, the Dutch passenger car park only amounted to 100,000 by this date.

36 Stisser (1938) 387; for the role of expectations in the diffusion of the car see: Mom (forthcoming f).

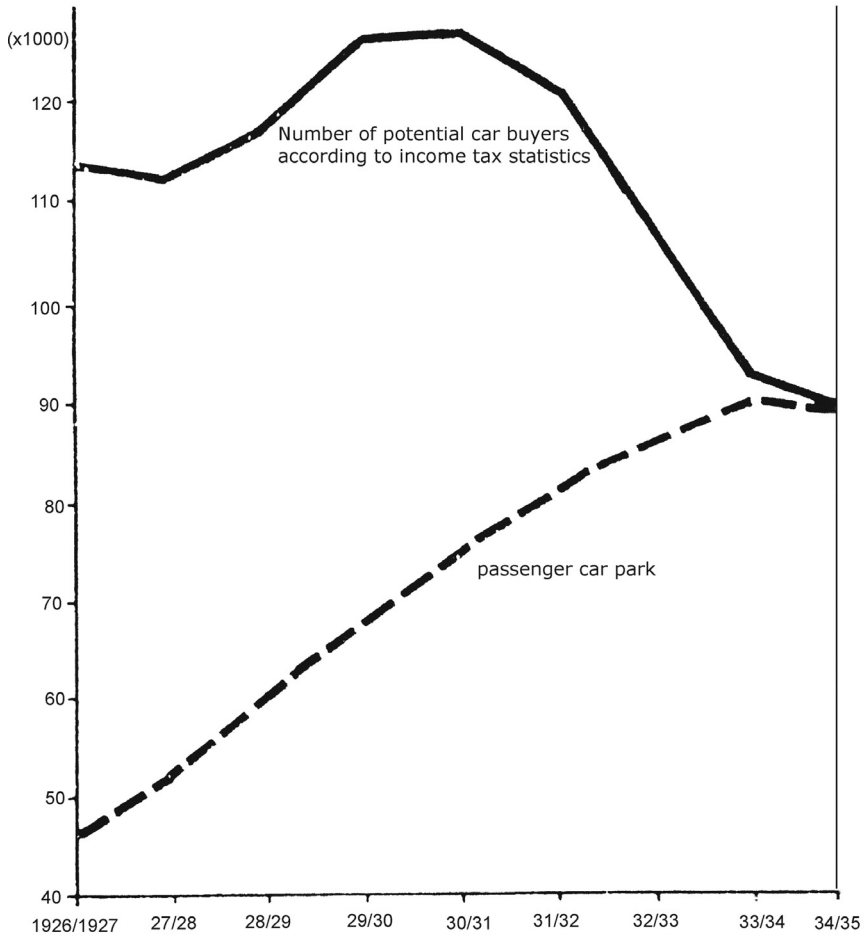


Figure 6. Passenger car market saturation in the Netherlands in 1935: convergence of would-be buyers (estimated on the basis of income tax statistics) and actual car park. Source: see note 35. Translation: this author.

If we are to explain this wish, it is remarkable that the average car buyer did not, just as during the pre-war years, opt for the lightest (and cheapest) cars available. Apparently something else was at work (again) than a pure economic reflex. When we compare the Netherlands with other countries without a large automobile industry, the Netherlands appear to be one of the most attractive export markets among the smaller European countries (figure 7 and table 1), because of at least three factors.

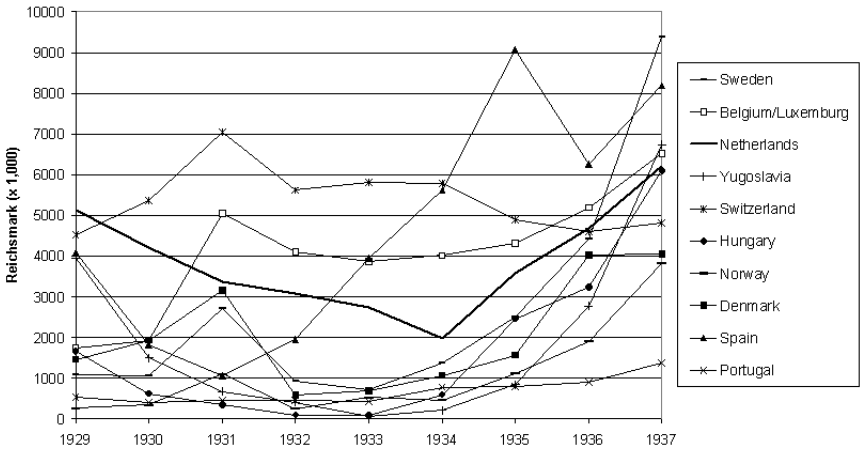


Figure 7. Value (in *Reichsmark*) of German passenger car and truck export to selected European countries without a strong domestic automobile industry, 1929-1937 (Source: Stisser, 167, table 21).

Table 1. Market shares [%] of foreign cars in several European countries in 1935 (Source: Stisser, 172-176, table 23)

| | American | German | British | French | Italian |
|---|---|---|---|---|---|
| Finland | 95 | 2 | 1 | 0 | 0 |
| Sweden | 80 | 8 | 1 | 3 | 1 |
| Rumania | 79 | 8 | 0 | 9 | 3 |
| Norway | 71 | 17 | 4 | 4 | 3 |
| Netherlands | 67 | 19 | 3 | 7 | 3 |
| Denmark | 59 | 13 | 23 | 4 | 0 |
| Spain | 41 | 20 | 11 | 14 | 12 |
| Portugal | 41 | 13 | 23 | 14 | 7 |
| Switzerland | 37 | 29 | 7 | 13 | 13 |
| Poland | 30 | 7 | 4 | 3 | 0 |
| Hungary | 7 | 52 | 3 | 2 | 28 |

Apart from the very liberal import tariffs of only 15% in the Netherlands, the Dutch road network was fully straightened, widened and paved with asphalt by the beginning of the 1930s; also, during the 1920s a pervasive 'urge to travel' emerged as the statistics of domestic and foreign tourism testify (see further down). On top of that, the road network improvements were funded by a new car tax (1927) that was levied on the basis of vehicle weight (instead of engine power, as was the case in most other European countries) which privileged exactly those cars with a high power-to-weight ratio and a relatively high engine power reserve. According to the German analyst, this explained why the Netherlands were among the countries in Europe where the Ford's and the Chevrolet's were the most popular. And indeed, during the 1920s they pushed the pre-war Renaults, Citroëns and Benz cars aside, makes that could not improve their market share during the Interbellum or even saw their shares diminish. The tendency to stay away from the lightest cars was further strengthened by the rule in the tax law which fixed the minimum taxable weight of a car at 800 kg, independent of its real weight. And although the German observer also pointed at a cultural trait 'that the Dutch value a car with enough room', a cultural trait he didn't explain any further, his analysis was largely based upon an economic explanation for this peculiar motorisation behaviour. This, however, cannot explain why the Dutch preference for larger cars already was present before the war (when the tax on cars was still levied on the basis of engine power, just as in most other European countries), nor can it explain the Dutch buying behaviour during and after the world recession.

Indeed, during the 1930s a shift in preference occurred among Dutch car buyers. The initial impulse was economic and political, because new taxes on fuel (introduced in 1932) were increased year after year to help alleviate the deficits of the Dutch railways, which occurred since 1931. Slowly, the American makes had to give way to an increasing enthusiasm for German cars (mainly Opel, taken over by General Motors in 1928, and DKW). Although the absolute dominance of the American makes never really was challenged until the end of the decade, sales figures clearly indicate a stabilisation of American makes and an increase for Opel during the recession. When sales picked up, Ford registrations increased again, but Opel registrations increased more, as did General Motor's cheapest American brand, Chevrolet (figure 8 and table 2)[37]. When, in 1934, the fuel tax was raised again, so much so that in combination with the recession registrations started to decrease in absolute numbers for the first time in history, the Dutch continued to refuse to buy the lightest cars (the increase of the cars of the middle category in figure 9 is in fact caused mainly by an increase of the cars of a weight between 1,000 and 1,250 kg[38]). The small British Austin and Morris cars, for instance, which in the UK enabled a new wave of diffusion among the lower middle classes, had only a modest market in the Netherlands[39].

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37 During the second half of the 1930s Fiat was boycotted by the Netherlands as a result of Dutch membership of the League of Nations.

38 Stisser (1938) 395.

39 Roose (2003) 8; O'Connell (1998); Stisser (1938) 406.

Figure 8a

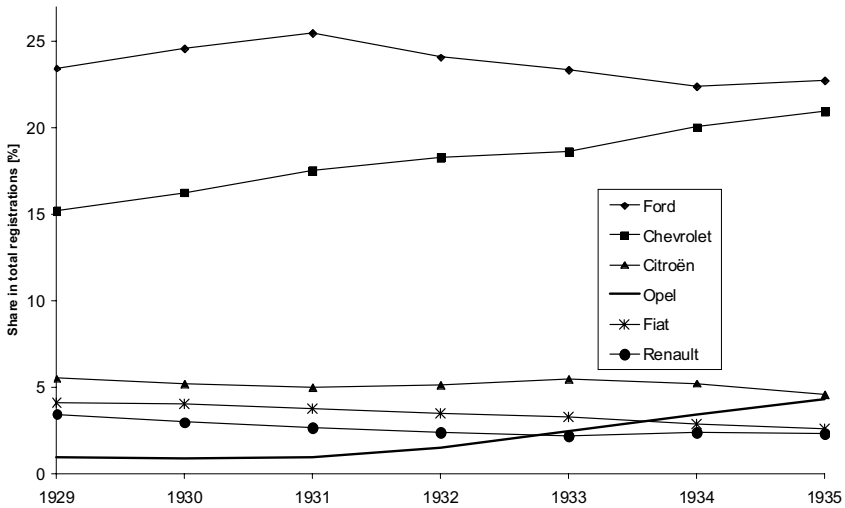


Figure 8b

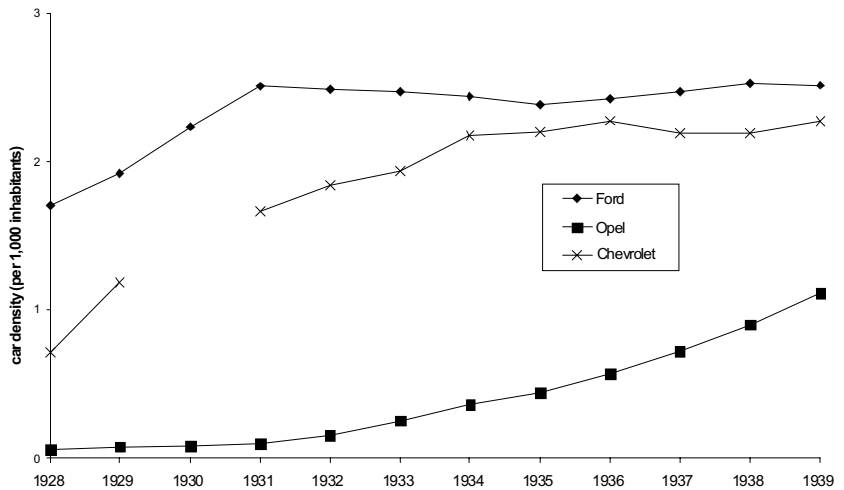


Figure 8. Shares of the Dutch car park (a) and densities (b) of several makes. Sources: Stisser, 403, table 14 (a) and Bosch e.a. (b).

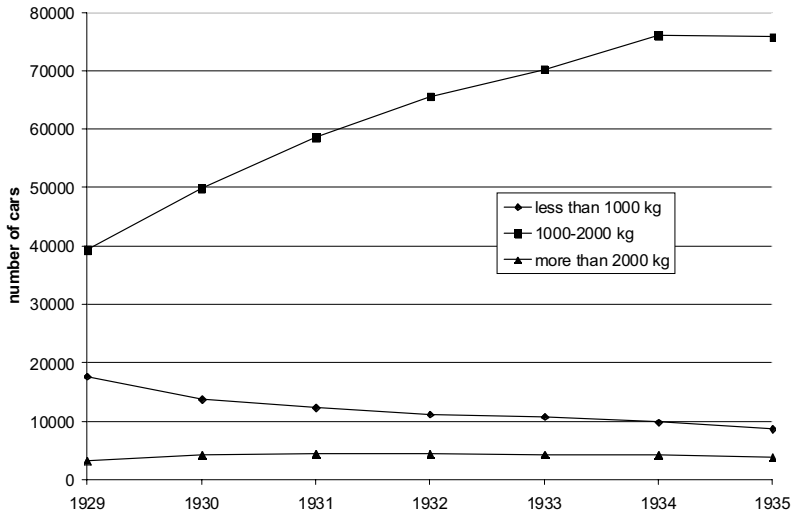


Figure 9. Dutch passenger car registrations according to weight, 1929-1935. Source: Stisser, 395, Table 6.

Table 2. Sales of new passenger cars in the Netherlands, 1931-1935
(Source: Stisser, 404, table 15)

| | **1931** | **1932** | **1933** | **1934** | **1935** |
|---|---|---|---|---|---|
| Ford | 2780 | 1494 | 1678 | 1587 | 2219 |
| General motors (except Vauxhall and Opel) | 3443 | 2063 | 2942 | 3032 | 3380 |
| Chrysler | 818 | 642 | 896 | 1212 | 801 |
| Other American makes | 2568 | 418 | 1011 | 1213 | 1254 |
| ALL AMERICAN MAKES | 9609 | 4617 | 6527 | 7044 | 7654 |
| British makes | | | | 608 | 564 |
| French makes | 1550 | 1952 | | 1044 | 564 |
| Italian makes | 281 | 337 | | 144 | 314 |
| German makes | 1074 | 859 | | 1641 | 2334 |
| Of which: Opel | 395 | 580 | 1255 | 976 | 982 |
| All other European makes | 323 | 1562 | | 61 | 94 |
| ALL EUROPEAN MAKES | 3228 | 4710 | 5860 | 3498 | 4005 |
| TOTAL SALES | 12837 | 9327 | 12387 | 10542 | 11659 |

**[50]**

Remarkably, although registrations decreased, sales did not to the same extent (table 2), indicating that some Dutch low-middle-class owners took their cars out of taxation (just as they had done during the First World War), while others continued to buy new cars, confirming our assumption (see below) about the stable purchasing power of large parts of the middle classes, despite the recession.

This leads to a different interpretation than the contemporary German market analysis, namely that the tax regime was not the cause, but just another expression of an already existing (and apparently quite powerful) preference for slightly larger cars. Whatever the reason for this (the relatively large size of the average Dutch family, varying between 4.2 and 5.3 children per family, depending of the province, seems plausible), it is important to emphasise that the reason given for the tax being based upon car weight was very rational: it reflected the wear of the recently entirely improved and very costly road network much better than a tax on the basis of engine power (although, of course, there is a positive, but not direct, relation between engine power and car weight). Whether the civil servants in the Ministry of Finance and the members of Parliament realised the potential consequences of their choice is not known, but should they have known, it seems reasonable to assume that, given the general preference for larger cars, they would not have been alarmed[40].

Anecdotal evidence from the post-World War II period confirms this conclusion. When, during the harsh reconstruction phase of the Netherlands, the import of American cars stagnated and the Dutch import policy (backed by American experts related to the Marshall Aid program) shifted definitively towards smaller and more fuel efficient European cars, the Dutch travelling salesmen protested loudly. They, as well as some Dutch businessmen, were used to drive large American cars before the war, and they had to relearn car driving, because the smaller European cars were much more critical as to the moment of gear shifting. Cars with large engines are less prone to stall when accelerated in too high a gear and they are much more 'friendly' towards a less skilled handling of the car[41].

## 5. User subcultures

The aggregate data do not provide us with information as to who exactly bought all these cars. Recent regional research into the province of Drenthe (near the German border) provides us with some insights in this matter, however[42]. In this province, one of the least motorised of the Netherlands, it was the local commercial middle-class (the bakers, the butchers, the grocers) who was among the first groups that started to motorise, and *not* the medical doctors, a phenomenon which also has been observed for the French country-side[43]. This group, less elo-

40 Bosch e.a. (2002), Annex, graph 2.

41 'Openhartige brieven aan onze vertegenwoordigers' (1951); see for the post-war emergence of European cars on the Dutch market: Mom (forthcoming c).

42 Staal (2003) 69-71

43 Gauthier (2000).

quent than their medical fellow-motorists and less cared-for by the state than the farmers, has hitherto been neglected by automotive historians. In Drenthe, in less than a decade, nearly all motorcycles were replaced by cars. More than a quarter of these were Model T's. In general, the share of the Model T's was larger in the small towns than in the larger towns, and larger in agrarian (Northern, Eastern and Southern) provinces than in urbanised (Western and central) provinces[44].

The graphs of figure 10 reveal that, while Ford registrations during the 1930s increased in highly urbanised provinces (Northern and Southern Holland, where Amsterdam, Rotterdam and The Hague are situated), they did not do so in the other, less urbanised provinces (figure 10a). At the same time, Ford's share in all provinces decreased, but more so in the thinly populated provinces (such as Friesland and Drenthe in the North, figure 10b), while Opel's share increased in all provinces, but mostly in Limburg, at the German border (figure 10c). Taking an even more detailed look in the province of Northern Holland (enabled by the uniquely detailed data of the national statistics bureau CBS for this period), we see Ford's share increase in the large cities, but decrease in the small cities (figure 10d).

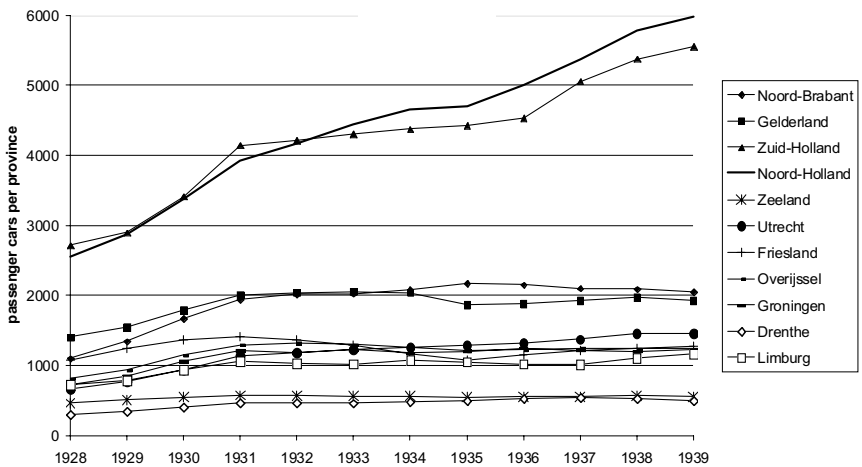


Figure 10a. Ford passenger car registrations. Source: Bosch e.a.

44 Bosch e.a. (2002).

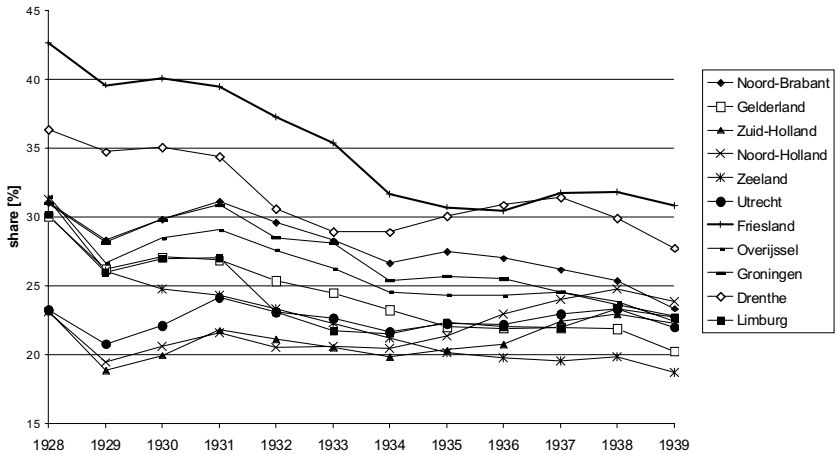


Figure 10b. Share of Ford in total registrations per Dutch province. Source: Bosch e.a.

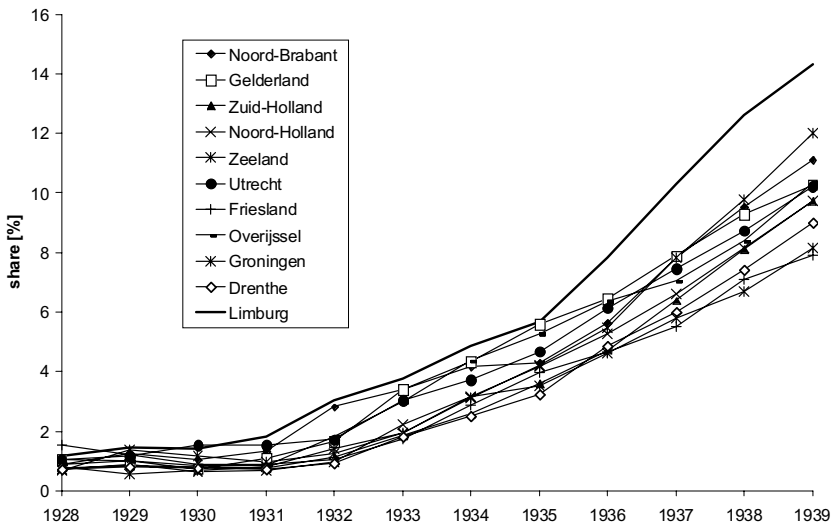


Figure 10c. Share of Opel in total registrations per Dutch province. Source: Bosch e.a.

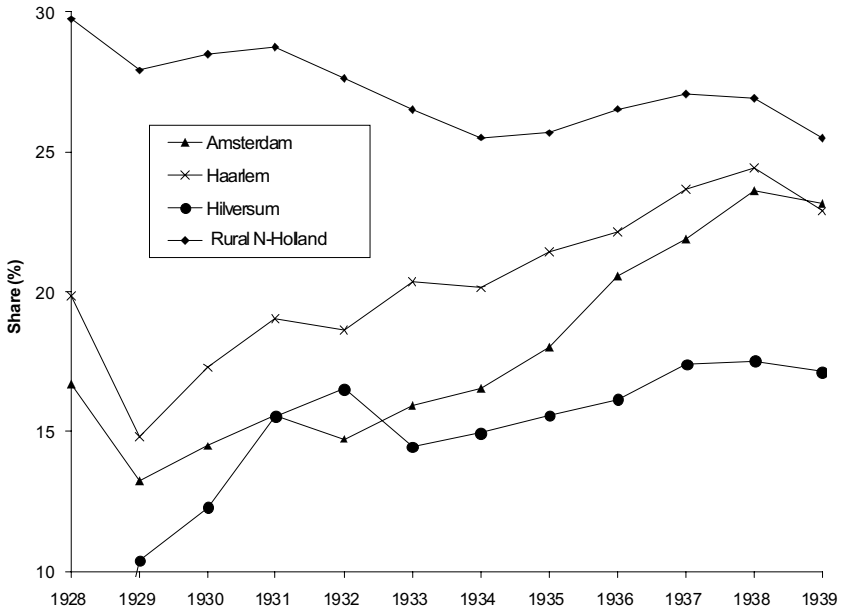


Figure 10d. Share of Ford in the province of Northern Holland in three large cities and in rural parts (cities with 5,000 inhabitants or less in 1930). Source: Bosch e.a.

This brings us to the following explanation. First, the 1920s data support our assumption that the Dutch car diffusion during the Interbellum consisted of two separate, mutually supporting waves: a wave emanating in the large towns and carried by urban users (whose choice of car make we do not know), with the medical doctors and, in general, the higher middle-classes in the lead, and a second wave (of mainly Model T's) starting in the smaller towns on the country-side, and carried by the lower (commercial) middle-classes. Both of these exemplary 'early adopters' had one crucial thing in common: they served a 'clientèle', a group of 'customers' whom they traditionally had serviced through horse traction. For these users, motorisation meant that they could expand their territory in order to recuperate the higher investment in a car faster. While in many cases the car enabled new functionalities not delivered by earlier transport modes, here a true substitution of an earlier 'technology' (horse traction) took place[45].

[45] See for the substitution of the horse by the car in several countries: Mom (forthcoming d).

**[54]**

During the 1930s, then, a second wave followed, consisting of Opel buyers (in all provinces), as well as a much larger group of urban buyers of the American makes. Here, a remarkable shift in automotive preferences took place: while Ford's model T, just as in the United States[46], was especially popular in the countryside, Dutch urban would-be adopters only became Ford buyers when the new model A (1927) came on the market. All would-be Dutch motorists, however, whether urban or rural, preferred 'big light cars', which is testified by their reluctance to buy the lightest and cheapest cars on offer. This preference was further fed when, in 1931, a Ford assembly plant was erected in Amsterdam that began production of the Ford Model Y a year later, geared towards a 'European' clientele. From 1931 to 1936 Ford provided, on average, 28 % of the passenger cars and 39 % of the trucks in the Netherlands[47].

The motorisation of the Dutch countryside had increased so far by the end of the 1920s that the road censuses established an average overall dominance of the motorised vehicle over horse traction, a process which continued during the 1930s: the censuses showed a consistently higher growth rate of motorised road traffic in the non-Western less urbanised Dutch provinces. This is, in principle, exactly according to the 'American model' of diffusion, with one big difference: whereas in the United States car densities in the less populated states quickly rose

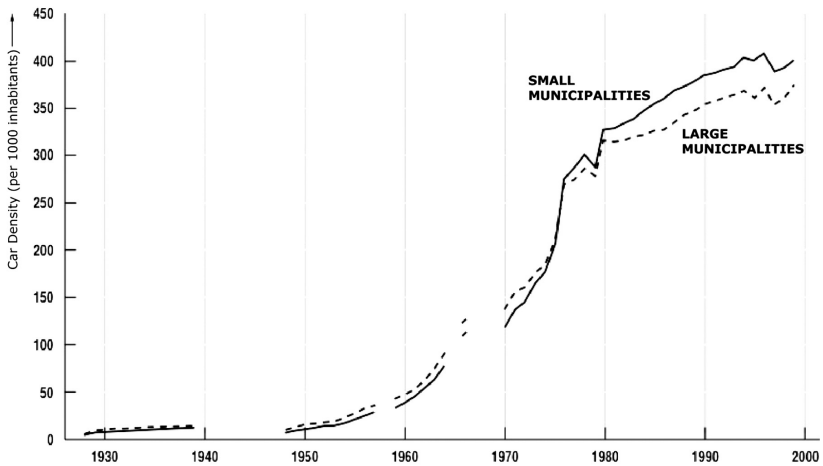


Figure 11. Car densities in the Netherlands in large and small municipalities, a basis for the assumption that some European countries followed another path of diffusion than the 'American model'. Source: Schot, Mom, Filarski and Staal (2002) 32.

46 Berger (1979).

47 Goey (2003) 241; Stisser (1938) 395.

above those in the larger cities (because of the wider range of mobility alternatives in these cities and because of congestion), in the Netherlands car densities in the small towns only surpassed those of the large towns as late as the 1970s (figure 11).

And although similar analyses from other European countries are not available[48], this leads to the assumption of the existence of two different diffusion patterns, one characteristic for 'empty countries' (countries with a low average population density such as the United States, and in Europe perhaps: Sweden, Germany, Spain) and one for 'full countries' with a high urbanisation rate (such as the Netherlands, and perhaps the UK and some other smaller European countries, such as Belgium). This would mean, of course, that the American way of motorisation is not *the* model, but just one of the two possible diffusion models developed in industrialised countries during the first half of the twentieth century[49]. It is clear that a diffusion carried largely by urban would-be motorists would take another form than a diffusion taken over and then dominated (as was the case in the US) by a large rural population devoid of any rapid means of locomotion. And although a 'gap' between European diffusion patterns (certainly those of the 'empty countries') and the American one cannot be denied, it can neither be denied that all relevant issues accompanying the diffusion did not show such a gap: the tax laws on cars before the First World War, the coordination crisis after that war, the alarming rise in traffic fatalities during the 1920s, the improvements in the road network, the decline in railway ridership, they all happened at the same time on either side of the Atlantic.

The question, then, is, how this car culture looked like. A group that can be studied in detail are the medical doctors, since they founded their own cooperative insurance and car parts buying association in 1924, and soon started to publish their own journal. The first 545 members owned 570 vehicles, nearly half of which were American (and 38 % Fords). Although before the First World War many Dutch medical doctors contented themselves with motorcycles, the annals of the doctors' car association clearly show that after about 1933 this group massively started to buy cars. By the outbreak of the Second World War, half of the 7000 medical doctors, dentists and veterinarians in the Netherlands were motorised[50].

To get a grip on their 'user subculture' is not easy, largely because they, just like the touring club ANWB, downplayed the 'fun' part of their car's functionality and overemphasized the 'utilitarian' aspects. When, in 1933 (at a moment that about 1200 doctors were motorised) the Dutch association of garage owners star-

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48 See, however, Flik (2001), who explains the reluctance of the German farmers to motorise during the Interbellum by pointing at their much lower income in comparison to their American counterparts. This may be a general issue for the whole of Europe, and sets this continent crucially apart from the USA giving support to our thesis of two distinct models of diffusion.

49 Jarvis (1972); Mom, 'Frozen History' (forthcoming b). This could also (at least partly) explain the exceptionally high diffusion rates in Denmark as an 'empty' country.

50 Van Lieburg (1999).

ted to attack these car users, because their cooperative buying behaviour disadvantaged the professional maintenance sector, some revealing stories appeared in the press. An organised car trip to Austria, for instance, ended in a late-night party in the hotel swimming pool in 'miniscule bathing suits of mathematically minimal dimensions'[51]. The suggestion, ushered within the context of a highly 'pillarized' national culture dominated by catholic and protestant denominations, was clear: here were car users who used the utilitarian character of their car as an alibi to submerge in frivolities and luxuries, beyond community control. Legion were the cases in court, initiated by doctors against their tax inspectors who refused to grant the usual 50 % tax deduction, because they did not use their cars 'exclusively or nearly exclusively' for professional purposes, as the text of the law stipulated. This struggle between car users and the state seems to have been part of an international phenomenon. The state looked upon national mobility from a utilitarian point of view, an attitude strengthened by its interests in centrally controlled and regulated mobility systems such as inland navigation, railways and aviation. Car users, however, who did not like to see themselves as simple 'monads' of a national 'fleet', constantly tried to escape the efforts of the state to control this new mobility culture[52]. In the case of the Dutch medical doctors, the use for business purposes increased, indeed, during the remainder of the 1930s. This can be derived from a cost calculation in 1935 in the association's journal, based on an annual mileage of 10,000 km, whereas in 1940 a sample of 48 members reported mileages of way above 20,000 km, with 39,000 km as the highest extreme[53].

To get a grip on the user culture of the much larger group of private car buyers (according to the ANWB: mostly middle-class family men) is even more difficult. In fact, we have only one single survey dating from the last two weeks of April 1935, when road users were stopped and interviewed while crossing one of the twelve crucial bridges and ferries over the large Dutch rivers. During the first week (including Eastern) 56 % of the 100,000 passers-by declared that they undertook the trip for 'business' purposes, while 44 % declared that they made a 'touristic' trip. The next week (no national holiday included), 77 % of the 77,000 passers-by were on a business trip. As about 20 to 30 % of the passing vehicles were trucks, this means that about as many car and motorcycle users were driving for tourism purposes as for business purposes. During holidays, and during the weekend, however, a tourist use culture dominated, a situation which was confirmed by the regular three-yearly road censuses[54]. Elsewhere, I have shown that during the Interbellum, nearly all *organized* motorists (members of the automobile club KNAC, the touring club ANWB, the motor cycle club KNMV, and the association of truck owners BBN – the latter with their passenger cars; together

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51 'Twaalf honderd dokters die ons te kort doen? De V.v.V.v.A.A.' (1933).

52 Mom (2005).

53 Van Lieburg (1999) 57.

54 Mijksenaar (1935) 898-900; 'Over tellingen en tolopbrengsten' (1935); *Verkeerswaarnemingen* (1936) Annex 13, 16, 17.

about half of all Dutch car and motorcycle owners) undertook at least one trip abroad annually[55].

Only during the latter half of the 1930s it seems that the utilitarian use of the passenger car started to dominate. One support for this assumption comes from the graph of figure 3: division by the maximum number of cars per year leads to annual mileages of about 10,000 km for 1920, but about 25,000 km for 1939, the latter being far above the average of today. Initially, the change was very gradual, which can be derived from the fact that the use of gasoline started to increase during these years above the increase of registrations, while improvements of car technology (including fuel consumption) would have suggested otherwise. Anecdotal evidence from 1938 suggests that the average mileage of the *entire* Dutch car fleet 'a couple of years ago' was about 34,000 km. According to a recent analysis the annual mileage started to increase strongly from 1934 onwards; this would remain high until about a decade after the war, when the well-known decrease towards values around 15,000 km or even lower started as a result of the mass motorisation of the 1950s and 1960s. This suggests that during the 1930s a new group of car users joined the ranks of the Dutch motorists, the same group that nowadays forms between 20 and 40 % of all car users in Western European countries who drive more than 30,000 km per year: business people, professional chauffeurs, travelling sales people. For this group, the car was not a substitute for the horse. Half a century before, they had already abandoned this travel mode and replaced it by the train. Now, the Dutch railways started to lose an important part of their regular, long-range, first-class and second-class passengers who travelled by *abonnement*[56].

In 1937 an engineer from the Ministry of Water Management (also responsible for roads) opined that urban traffic already was dominated by the utilitarian use of the car. Against the background explained above it seems reasonable to conclude that non-urban, long-range traffic was dominated by tourism and pleasure[57].

## 6. Explaining motorisation during the Interbellum

Although these extreme big mileage car users influenced the statistics of the 'performance' (in passenger-kilometer) of the Dutch car park considerably, in absolute numbers they formed only a minority, too small for the major representative of the users' interests, the touring club ANWB. The role of this 'intermediary' factor in the Dutch mobility landscape during the Interbellum deserves a more detailed analysis, in order to understand the major shifts in the user culture of this phase[58].

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55 Mom (forthcoming e).

56 Van den Heuvel e.a. (2004) 9; Insider (1936); fuel consumption: Willigen (1938); H.T. (1938) 40; 20 – 40 %: www.irfnet.org.

57 Gils (1937).

58 Mom, Staal and Schot (forthcoming).

**[58]**

Dutch neutrality during the First World War had resulted in large 'war profits' for the country's agriculture, international trade and industry, and after the war large 'peace dividends' further supported an economic boost that probably was unique in Europe (in terms of purchasing power and consumption), although the exceptionally high penetration rates in Denmark (see figure 2) during this phase suggest that other small countries fared at least as well. The 1920s witnessed the breakthrough of the Second Industrial Revolution based on the electric motor and an enormous productivity increase per inhabitant. The service economy, traffic in the Dutch harbours and the local influence of some very large 'multinationals' (Philips, Shell) grew spectacularly[59]. This process was accompanied by an increase of urbanisation and of the internal market *vis-a-vis* international trade, while the influence of the national government in the economic and social life of its citizens also increased considerably[60].

Although the number of organised workers and collective work contracts increased, the organisation rate of the Dutch workers remained low compared to other countries. Nevertheless, until 1932 the real wages kept increasing and from then on started to decrease slowly, and from 1936 quickly. That year, the national unemployment rate reached its maximum of 17.4 %, but prices decreased, too, with the result that the middle-classes never saw their income fell below the 1929 level. Only in 1935 did consumption decrease in absolute figures, including cars, an indication that at that moment the purchasing power of the middle groups was being affected, too. These figures do not include the commercial middle-groups (such as shop owners), and it was among these groups (including many garage owners) that anti-democratic and fascist tendencies started to appear. This was part of a more general silent admiration for what Germany was accomplishing in terms of unemployment relief and prestigious large undertakings, such as the building of the *autobahnen*. This may have supported (or at least ideologically justified) the shift in preference from American to German cars. Given the absolute dominance of the American makes throughout the 1930s, however, and given the importance of the attitude of the middle-classes in motorisation matters, this effect was only marginal[61].

It is, against this background, all the more remarkable that the growth of the 'mobile holiday', started before the war, intensified during the Interbellum and was hardly effected by the economic turmoil. New technologies (telephone, radio, movies) filled the free Saturday afternoon (introduced by law in 1922) and in the Dutch households 'entertainment technologies' like radio were more popular than technologies that could lighten the work burden of women[62]. Remarkably, too, the

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59 Van Zanden (1997) 83, 128-147; Veenendaal (2004) 354; Smits (2003) 233-255.

60 Kuiler (1946) 85-87, 110-111; Thurkow (1983); Knippenberg and de Pater (1988) 120; Van Zanden (1997) 59.

61 Van Zanden (1997) 105-111, 148-163; Schuursma (2000) 269-270; Van der Cammen and de Klerk (2003) 127-128; Hessels (1973) 137-138.

62 Schuursma (2000) 399; Frankema (2001) 149; Knippenberg and de Pater (1988) 74-77; Schot and Rip (2003) 25.

number of collective work contracts exploded during the world crisis which meant that the 'holiday participation' (the part of the population that enjoyed one holiday per year) doubled during the Interbellum to 20 %: annually between 500,000 (1920) and more than one million (1940) of the Dutch population, went on holidays. Social research during the 1930s revealed that most schooled (and especially urban) workers enjoyed a holiday of one to two weeks[63]. But also the unemployed enjoyed a form of 'commuter camping', visiting holiday resorts in the weekends around the large towns and travelling back to work (or for the obligatory visit to the employment office) on Monday. During the world recession, when German tourists stayed at home, tourism experts complained that the decrease in visits to the beaches was not compensated by Dutch tourists, because the Dutchman 'as soon as his holiday starts, immediately leaves his country, even if it is only a couple of kilometres across the border. (...) Ask the small citizen, the worker, who nowadays spend their free five days abroad, brought there in overfilled buses, why they do so...and they answer: because it is much more free and fun than at home'[64].

The Dutch 'society of minorities' which locked every religion as well as the social-democrats in their own social and cultural sphere (contacts between the pillars mainly occurred at the top where a negotiation tradition had been moulded aimed at 'consensus') was not reflected in the structure of the ANWB, however. As one of the few Dutch national mass associations, the touring club was 'neutral' and not related to either the catholic or protestant 'pillars', nor the socialist one. As such, the touring club can be ideologically and culturally compared to the liberal part of the Dutch population, which was the least 'pillarized'. Within a pillar, a special form of 'collective holiday making' had developed, based on camping, youth hostels and 'nature houses' where singing, walking, cooking and all other leisure activities were executed under the banner of the pillar's cultural paradigm. Pillars had their own schools, youth movements, unions, travel agencies and, in some provinces, even buses. Many Dutch middle-class members and workers never left their pillar, from birth, through school, marriage and occupation, all the way until their funeral[65].

Against this background, the leaders of the ANWB tried to formulate a policy of opening up its organisation for the new groups of holiday goers, while at the same time trying to maintain its individualistic and liberal petty-bourgeois ideology. When, during the recession, its membership started to decrease for the first time in its 50 years history, it decided to get involved in the camping movement, although it kept emphasising the advantages of 'individual, sporting tourism' as an antidote for the 'herd tourism' of the 'great masses'. But in order to grow, it had to embrace at least a part of the leisure culture of these masses, so it slowly

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63 Hessels (1973) 82-84, 133-134; Philips (1995) 38-40; Blonk and Kruijt (1936); Veenendaal (2004) 335.

64 Hessels (1973) 147-148.

65 Weyde (1940); Linders – Rooijendijk (1989) 194-333; Hessels (1973) 152-153.

started to shift towards more 'folkish' forms of leisure. One of the problems was that many holiday-goers were already involved in leisure activities organised by their respective pillars and the ANWB's leadership feared to attract only the very 'low-grade' non-organised groups, although it can be assumed that exactly those groups were less receptive to the 'collective' ideal of leisure. The only solution available, therefore, was to acquire members from within the 'pillars'. It is, at the current state of research, not possible to ascertain whether the ANWB was successful with this strategy. What is clear, however, is that, in the end, it was the 'family' which offered a way out of ANWB's dilemma: by emphasizing the family as basis for leisure activities, collectivity and individualism could be reconciled. This 'invention' of the family as the very basis of the next Dutch motorisation wave was not ANWB's prerogative. Emphasizing the importance of the family was part of an international cultural shift, but the 'discovery' of the family was especially relevant for leisure mobility in countries with a relatively large average houshold size: when the middle-class family (with three to five children!) which hardly could afford buying a car was confronted with the alternative option of going on holidays by train, the choice in favour of the (cheaper!) car was not very difficult to make. It was the ANWB who complained during the crisis that exactly this type of car owner (the family man who hardly could afford his car) ran the risk to have to sell it again as a result of the increasing taxes. However this may be, tourism blossomed as never before, also during the recession. In 1936 nearly 350,000 Dutch people went across the borders, most of them to Germany. This surprisingly large group of international tourists had about the same size as all employees working under a collective contract. Most of them went by train, or bicycle, or by train and bicycle. Earlier, we estimated the number of car tourists going abroad within this group at about 50,000[66].

When the ANWB leaders during the Interbellum struggled to become recognised by the national government as a serious partner for advice and negotiation, it was this group of new members whom they referred to. And it was not the tourism movement which they emphasized in their propaganda (because this was still considered a luxury by the government) but the everyday use of the growing fleet of buses, claiming that road transport meanwhile had become a 'necessity' for a large part of the Dutch population, and certainly, in the future, would become ever more important as the situation in the United States learned. This was part of an international shift within the road and car lobby. For instance, at about the same time in the United States the touring club AAA emphasized the utilitarian character of the automobile, and, more so than in Europe, even argued that holidays, and leisure time in general, were a 'necessity' to recuperate from the stresses at work. Nevertheless, when the American government during the Second World War wanted to ration the use of the automobile, it calculated (rather conservatively, as it admitted) that about 43 % of all trips were 'non-essential'[67].

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66 'De A.N.W.B. in zijn 52e levensjaar' (1935) 944; 350,000 estimated on the basis of: H.J.P. (1937) 2329 (table).

67 Flamm (2006). Recently, an attitudinal survey among British car drivers resulted in the con-

The struggle about the 'necessity' of the car during the Interbellum still haunts transport experts and historians alike today. Both the emphasis by touring and automobile clubs on the utilitarian character of the car and the national government's emphasis on its luxury character have strengthened the myth that mobility is largely an economic entity which can (and should) be planned centrally. In reality, as we hope to have shown, the success of the car can only be explained by its hybrid use of necessity and fun. Historically, first came the fun, and then the necessity, but the fun never left. When we realize the surprisingly high part of the fun character of the automobile, we cannot conclude otherwise than that the utilitarian ideology functioned largely as an alibi, behind which the fun part was hidden and (at least in the Netherlands) secretly enjoyed.

## 7. Conclusion

The Dutch motorisation during the Interbellum may stand as a model for a different type of diffusion than the American model, characteristic for countries with a high rate of early urbanisation. This analysis suggests an easy test for scholars who wish to establish their country's adherence to either one of these 'models': in countries following the non-American diffusion model, car densities in the 'country-side' did not surpass those in the big towns before the Second World War. Aggregate diffusion curves on the basis of car densities may hide these differences as they privilege countries with large 'open' spaces. Hence, comparisons between countries on the basis of such curves should be looked upon with a lot of reservations, and at least should be supplemented with additional empirical evidence at a lower level of aggregation[68].

At this lower level, several peculiarities of the Dutch case set it apart from other European countries. A high rate of bicycle use, a strong middle-class led, in mobility matters, by a non-pillarised mass-organisation of the national touring club, the absence of a domestic car and motorcycle industry and low import tariffs, made it into an attractive export market, first for American manufacturers, then for German ones. Despite the hesitant shift towards European cars, however, Dutch motorists showed a remarkable preference for larger cars, probably to be explained by a larger average household size. Indeed, the average size of the Dutch car during the 1960s and 1970s decreased to an average 'European' size, as soon as the Dutch average household very quickly decreased in size as a result of the 1960s movement.

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clusion that less than 50 % of them reported their annual driving as 'essential'. Quoted in: Handy, Weston and Mokhtarian (2005) 183-203.

68 Also, the German market analyst opined that if the comparison with other countries was not done on the basis of car density, but took into consideration the 'average distance between neighbours' and the length of the road network, the Netherlands were one of the most motorized countries, after the US, the UK, France, Belgium, Luxemburg and Denmark. When compared on the basis of car density related to road network length only, Dutch motorisation followed directly behind the UK and Belgium, and before the US. Stisser (1938) 377, 383

**[62]**

The analysis of several user subcultures makes it plausible that car use was at least as much coloured by pleasurable, 'fun' aspects of leisure time than by utilitarian aspects. In fact, a pure utilitarian use, expressed in extremely high annual mileages, only appeared during a relatively brief period of twenty years, interrupted by the Second World War. The adventurous side of Dutch motorised mobility was constantly supported, 'fed' from the 'underside' of the diffusion spectrum, by former motorcycle users and, after the war, by pre-war bus passengers. After the war, new groups of car users would join them, initially consisting of young family men from the lower middle and working classes who just had bought or rented a house in the new suburbs. They again started to strengthen the pleasurable side of the car culture, quickly (and definitively) driving the purely utilitarian car users into a minority. They did so in 'affordable family cars' of a European, rather than American style[69].

Therefore, motorisation by car can best be analysed within the context of overall mechanisation (bicycles) and motorisation (motorcycles, mopeds and scooters, buses) of mobility. From that perspective, it remains remarkable that not much more than the 100,000 Dutchmen in 1940 had adopted the automobile, given the large second-hand car market and the extensive credit system, leaving the question of the low pre-war car densities in comparison to other European countries still not fully answered. Only further research, preferably based upon a comparison with other European countries, can hopefully give an answer to this question.

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69 Mom and Filarski (forthcoming).

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