

Bicycle history as transport history: the cultural turn

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Compared to railways, shipping, aviation and the automobile, the bicycle has received little attention from transport historians. In his 2003 survey of the field Gijs Mom observed that the bicycle was among the themes that are ‘virtually non-existent’ in the literature on transport history.¹ This is remarkable, since few scholars would deny that the bicycle became an important mode of transport in many European cities during the inter-war years, significantly enhancing the mobility of millions of workers and middle class men and women. Post-war, cycle use went into sharp decline across European cities, and this decline was not checked until the 1970s (Figure 1). From the 1970s, the Netherlands and Denmark adopted transport policies to facilitate or stimulate cycle use, such that up to 40 per cent of urban trips are now made by cycle in a number of Dutch and Danish cities. Similar policies have been adopted in many other European nations and cities since the 1990s. At the same time there was a growing interest in cycling as a sport and recreational activity, especially since the mountain bike became popular in the 1980s.² Outside of Europe, in North America and in developing countries, cycle use has followed different patterns and requires its own historical treatment. In this review article we focus on Western Europe.

Explaining different national and local levels of bicycle use in western countries, many contemporary analyses agree on the relevance of cultural factors, next to or in combination with infra-structural characteristics and policies.³ As we show in this survey of European bicycle historiography, these contemporary analyses are in line with a ‘cultural turn’ in recent publications on the history of bicycles and bicycling. The challenge that remains is to integrate bicycle historiography into general histories of twentieth century mass mobility.

Technological determinism versus social-constructivism

Conventionally, histories of the bicycle have focused on its nineteenth-century technological development: from draisine, through front-wheel driven velocipede and high-wheeler to the chain-driven, diamond-framed safety bicycle. This technological history of the bicycle is mainly a history of inventions and inventors, at best extending into a history of innovative business efforts and commercial vicissitudes.⁴ While

¹ G. Mom, ‘What Kind of Transport History Did We Get? Half a Century of the JTH and the Future of the Field.’ *Journal of Transport History* 24 (2003): 121-38, here 130-131.

² See P. Rosen, *Framing production: technology, culture, and change in the British bicycle industry* (Cambridge: MIT Press 2002), esp. 119-154; F.J. Berto, *The Birth of Dirt: Origins of Mountain Biking* [2nd edition] (San Francisco: Cycle Publishing/ Van der Plas Publishing 2009)

³ Emphasising the relevance of cultural analysis of bicycle use in both past and present is D. Horton & P. Rosen and P. Cox, (eds.), *Cycling and Society* (Aldershot: Ashgate, 2007).

⁴ We are not denying here, of course, the importance of the economical perspective in bicycle history, see e.g. R. Lloyd-Jones, M.J. Lewis and M. Eason, *Raleigh and the British bicycle industry: an economic and business history, 1870-1960* (Aldershot: Ashgate, 2000); T. Burr, ‘French Expansion, American Collapse, 1890-1910’, *Cycle History* 16 (2005), 120-142.

becoming more rigorous in the last decades,⁵ this line of bicycle historiography tends towards technological determinism: it makes increasing bicycle use the logical outcome of a progressive series of technical experiments, failures, improvements and breakthroughs.⁶ A common implication of this perspective is that bicycle technology reached its 'final' stage in the 1890s and was subsequently surpassed by car technology, losing its appeal – if not to cyclists, at least to the historian. Bicycle history from this technological perspective is therefore often restricted to the pre-automotive era.

A major change of perspective came to the fore with Wiebe Bijker's *Of bicycles, bakelites, and bulbs: toward a theory of sociotechnical change* (1995). Together with Trevor Pinch, Bijker has pioneered a social-constructivist analysis of technology, shifting focus from inventors to users of technology, and from the technology itself to the meanings with which it was invested. Bijker extensively analysed the case of the high-wheeler to demonstrate that this 'artefact' was no unambiguous technological object, but a socially determined construction marked by 'interpretative flexibility'. Although Bijker presented his historical analysis in order to prove his theoretical claim rather than to contribute to bicycle history in itself and although he received severe empirical criticism from bicycle historians,⁷ he provided a major stimulus to bicycle historiography by explicitly calling attention to the sociocultural determinants of the technology and use of bicycles. In fact, in many historical analyses of the bicycle, this perspective has become paradigmatic, even if Bijker's theoretical model is not adopted in all its details.⁸

The bicycle in transport history

An important example of this new perspective, and, at the same time, the most notable exception to the general neglect of the bicycle in transport history, is the extensive comparative historical study of the development of twentieth century bicycle use and policies in nine European cities (including four Dutch) by Adri Albert de la Bruhèze and Frank Veraart.⁹ These Dutch historians of technology traced the general lines of development of bicycle use in the twentieth century (Figure 1), and explained these by historical changes of four different factors: spatial urban structures, car use and other

⁵ See e.g. K. Kobayashi, *Histoire du vélocipède de Drais à Michaux, 1817-1870. Mythes et réalités* (Tokyo: Bicycle Culture Center, 1993); H.-E. Lessing, *Automobilität: Karl Drais und die unglaublichen Anfänge*. (Leipzig: Maxime-Verlag, 2003); N. Besse (ed.), *The velocipede as object of modernity* (Saint-Étienne: Musée d'Art et d'Industrie, 2008). This development can be traced in *Cycle History: Proceedings of the International Cycle History Conferences*, appearing every year since 1990. For a full cycling history bibliography (including sports history and business history, left out of this review article) see the following website, maintained by Manuel Stoffers: www.fasos-research.nl/sts/cyclinghistory/

⁶ A recent example is D.V. Herlihy, *Bicycle: the history* (New Haven, CT: Yale UP, 2004); older examples include J. Woodforde, *The Story of the Bicycle* (New York: Universe Books; London: Routledge & Kegan Paul, 1970); S. Beeley, *A History of Bicycles: From hobby horse to mountain bike* (London: Studio Editions 1992).

⁷ See, for example, the discussion in *Technology & Culture* 43 (2002) 351-373.

⁸ A social and cultural approach can already be found in S.H. Aronson, 'The sociology of the bicycle', *Social forces* 30 (1952) 305-312 and R.A. Smith, *A social history of the bicycle: its early life and times in America* (New York 1972). Extending Bijker's analysis to include both industry and global culture was Rosen, *Framing production*.

⁹ A.A. Albert de la Bruhèze & F. C. A. Veraart, *Fietsverkeer in praktijk en beleid in de twintigste eeuw: overeenkomsten en verschillen in fietsgebruik in Amsterdam, Eindhoven, Enschede, Zuidoost-Limburg, Antwerpen, Manchester, Kopenhagen, Hannover en Basel* (Den Haag: Ministerie van Verkeer en Waterstaat / Stichting Historie der Techniek, 1999).

transport alternatives, the position of the bicycle in traffic policies and the public image of the bicycle. On the basis of their comparison, they emphasised the long-term influence of bicycle policies and, employing archival sources, concluded that these were strongly linked to public images of cycling. In this respect, Bruhèze and Veraart's analysis underlined the relevance of a socio-cultural approach in transport history. Unfortunately, their research was not followed-up by other extensive historical studies exclusively focused on bicycle traffic.¹⁰

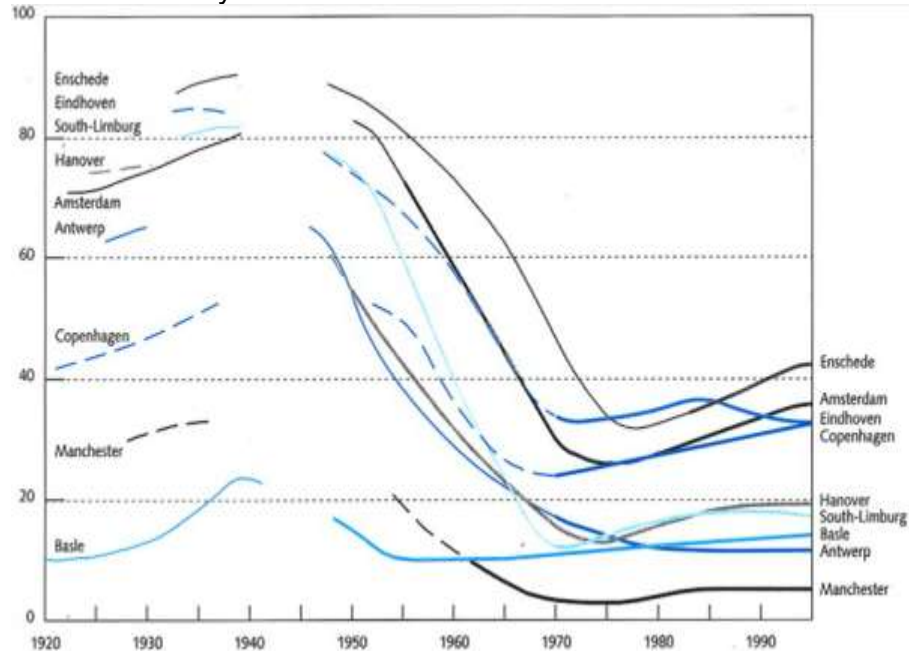


Figure 1: Reconstructed trend lines of the bicycle share in the total number of car, bicycle, moped and public transport trips in nine West European Cities, 1920-1995 (in %). From: Albert de la Bruhèze & Veraart, *Fietsverkeer*, 34.

That doesn't mean that the bicycle is completely absent in recent transport and mobility histories. For instance, cycling is mentioned several times in Ueli Haefeli's 2008 important study of traffic policies in several German and Swiss cities between 1950 and 1990. Still, Haefeli's comparative research is dominated by the car-versus-public transport dichotomy and, in contrast to Bruhèze and Veraart's multi-faceted analysis, tends to explain differences in the 'remarkable come back' of the bicycle in the 1980s simply by referring to the size and location of the local universities.¹¹ The bicycle also plays a minor role in the book by British scholars Pooley, Turnbull and Adams, who have examined changes in personal mobility since 1890 in Britain by analysing 1834 individual life histories. Their new approach to mobility history opens up interesting possibilities, but

¹⁰ A recent exception, dealing with the history of bicycle use in Vienna and Linz, is B. Kreuzer, '1 Fahrrad = 0,25 PKW-Einheiten: Das Fahrrad im Stadtverkehr zwischen verpaßten Chancen und gewollter Marginalisierung, Pfadabhängigkeiten und Gestaltungsspielräumen', in P. Michael, N. Herta & J. Michael (eds.), *Erfahrung der Moderne. Festschrift für Roman Sandgruber zum 60. Geburtstag* (Stuttgart: Franz Steiner Verlag, 2007) 465-481.

¹¹ U. Haefeli, *Verkehrspolitik und urbane Mobilität. Deutsche und Schweizer Städte im Vergleich 1950-1990* (Stuttgart: Franz Steiner Verlag 2008), esp. 298, 302.

also raises serious questions; in respect to the bicycle, their approach arguably leads to an underestimation of British levels of cycling as professionals and married people are overrepresented in their sample.¹² Again, in Bagwell and Lyth's *Transport in Britain* (2002) the bicycle is mentioned occasionally, but its rise and demise as urban transport is dealt with in no more than one or two pages.¹³ Even recent transport histories of the Netherlands, with its unsurpassed high levels of bicycle use in the second half of the twentieth century, almost exclusively pay attention to the bicycle as overture to the emergence of motorized individual transport.¹⁴

Indeed, in transport histories the bicycle most often turns up as a 'precursor of the car' – i.e. as the first mass vehicle of individualised transport.¹⁵ Of course, it is true that the introduction of the bicycle paved the way for the infrastructure necessary for the spread of cars, not only surfaced roads and signposts, but also networks of retail and repair shops and guest houses for travellers. The linearity of this narrative, however, is easily elided to a 'perspectival shortening', suggesting that the bicycle 'gave way' to the automobile earlier and more completely in the course of twentieth century than in fact happened.¹⁶ Moreover, this popular academic viewpoint tends to make transport historians ignore the specific features of bicycles vis-à-vis cars, such as their being clean, silent and light; their being usually faster in cities and slower on long distances; their requiring physical activity on the part of the rider, who is unshielded from the elements. As historical research shows, however, these distinctive features are important in understanding why some people, like most Dutch and Danish, kept to their bicycle even when cars came within their reach.

Exploring the sociocultural meanings of the bicycle

A dominant theme in the increasing literature on the sociocultural history of the bicycle is its role as both product and instrument of social change in the decades around 1900. In this historiography, bicycles are afforded an important role in the 'ride to modernity', as Glen Norcliffe called his study of the introduction of the bicycle in Canada.¹⁷ Subjects treated under this common denominator range from the role of the bicycle as the 'work-horse of democracy',¹⁸ to its significance as a favourite object of avant-garde artists.¹⁹

¹² C. G. Pooley, J. Turnbull & M. Adams, *A mobile century? Changes in everyday mobility in Britain in the twentieth century* (Aldershot: Ashgate 2005), esp. 41.

¹³ Ph. Bagwell & P. Lyth, *Transport in Britain, From Canal Lock to Gridlock* (London, New York: Hambledon & London: 2002), esp. 120, 158.

¹⁴ See J.W. Schot et al. (eds.), *Techniek in Nederland in de twintigste eeuw*, vol. V, *Transport, communicatie* (Zutphen: stichting Historie der Techniek 2003) 23-27; G. Mom and R. Filarski, *De mobiliteitsexplosie, 1895-2005. Van transport naar mobiliteit 2* (Zutphen: Stichting Historie der Techniek 2008) 55-59. More examples are mentioned in: M. Stoffers & H. Oosterhuis, '“Ons populairste vervoermiddel”. De Nederlandse fietshistoriografie in internationaal perspectief', *Bijdragen en Mededelingen betreffende de Geschiedenis der Nederlanden*, 124(2009), 390-418.

¹⁵ See for a criticism M. Burri, *Das Fahrrad: Wegbereiter oder überrolltes Leitbild? Eine Fussnote zur Technikgeschichte des Automobils* (Zürich: ETH / Institut für Technikgeschichte, 1998), retrieved online on 17 March 2009: www.tg.ethz.ch/dokumente/pdf_Preprints/Preprint5.pdf.

¹⁶ D. Edgerton *The Shock of the Old: Technology and Global History since 1900* (London: Profile 2006) provides a useful critique of this narrative in a broader context.

¹⁷ G. Norcliffe, *The ride to modernity: the bicycle in Canada, 1869-1900* (Toronto: University of Toronto Press, 2001).

¹⁸ For workers and the bicycle, see e.g. R. Rabenstein, *Radspport und Gesellschaft: ihre sozialgeschichtlichen Zusammenhänge in der Zeit von 1867 bis 1914* (Hildesheim, München, Zürich:

Research on the history of cycling as the first mass spectator sport, characterised by the typically modern merging of media, industry, politics and sports, should at least be mentioned here.²⁰ A few sub-themes of special interest to transport history, are singled out below.

Several recent authors argue that bicycling reflected and promoted a new body experience, essential in understanding the continuing appeal of cycling.²¹ Early cyclists experienced the bicycle not only as an instrument of liberation and a widened horizon, but also as the perfect symbiosis of man and machine. In contrast to train travel where the individual must comply with the railroad system, bicyclists were their own master and in charge of their 'machine': simultaneously rider, engine and passenger. Influenced by thermodynamics, the physiology of work and the idea of the human body as an engine, the bicycle gained the status of an especially efficient machine for converting human energy into mobility. Bicycling cost energy, but also generated new vitality, thus forming an ideal therapy against nervous disorders, in particular neurasthenia: the 'disease of modern civilisation'. From medical debates on the drawbacks and benefits of bicycling emerged an image of the bicycle as a training and compensation machine for counterbalancing the effects of high-paced modern life. On a bicycle citizens could realise the ideal of 'tranquillity in mobility'; in both physical and mental respects they would experience themselves as 'masters of modernity' (Ebert).

The first bicyclists were bourgeois men who espoused a progressive attitude of life and sang the bicycle's praise as a masterly technological innovation and a 'freedom machine'.²² Associated with progressive thought, even the velocipede and the high-wheeler were more than just toys or 'adventure machines' for young virile men. Bicycles conveyed unprecedented individual autonomous mobility, and brought about new experiences of time and space. This is evidenced most strikingly in the remarkable number of long tours and world journeys undertaken by bicycle prior to 1900, from the high-wheeler onwards.²³ Rising working-class cycling organisations subsequently

Weidmann, 1995) esp. 178-198; S. Pivato, 'The bicycle as a political symbol: Italy, 1885-1955', *International Journal of the History of Sport*, 7(1990), 172-187, esp. 177-181.

¹⁹ See for example J. Krausse, 'Versuch, auf's Fahrrad zu kommen. Zur Technik und Ästhetik der Velo-Evolution', in H. J. Neyer (ed.), *Zwischen Fahrrad und Fließband. Absolut modern sein: culture technique in Frankreich 1889-1937* (Berlin: Elefanten Press 1986) 59-74; and the contributions of K. Riha and M. Pötzsch in M. Jansing (ed.), *Gegenwind. Zur Geschichte des Radfahrens* (Bielefeld: Kerber Verlag, 1995) 10-33 and 91-98.

²⁰ See e.g. Rabenstein, *Radsport und Gesellschaft* and C. S. Thompson, *The Tour de France: A Cultural History* (Berkeley, CA: University of California Press 2006). Interestingly, countries with a strong culture of competitive cycling (Italy, France, Belgium), are not among the countries with the highest percentages of utility cycling (the Netherlands, Denmark).

²¹ A.-K. Ebert, 'Zwischen Radreiten und Kraftmaschine. Der bürgerliche Radsport am Ende des 19. Jahrhunderts', *WerkstattGeschichte* 44 (2007), 27-45; J. Radkau, 'Das Fahrrad in den Technikvisionen der Jahrhundertwende, oder: das Erlebnis in der Technikgeschichte', in: V. Briese, W. Matthies and G. Renda (eds.), *Wege zur Fahrradgeschichte* (Bielefeld: 1995) 9-32, q.v. 14-28; C. Thompson, 'Corps, sexe et bicyclette', in C. Bertho-Lavenir & O. Vallet (ed.), *La bicyclette. Les Cahiers de médiologie* 5 (Paris: Gallimard, 1998), 59-67.

²² J. Pinkerton, 'Who Put the Working Man on a Bicycle?', *Cycle History* 8 (1997), 101-106, q.v. 101.

²³ See the chronological list of travel accounts (in English) published by the American historian D.R. Jamieson, 'Bicycle travel and touring resources' (last updated 2009), retrieved online on December 22, 2009 from <http://personal.ashland.edu/djamieso/>

claimed the extension of individual mobility and 'healthy' recreation as the democratic right of all citizens.²⁴

As an instrument of individual liberty and self-autonomy the bicycle was also an attractive means of transportation for women who pursued emancipation. From the outset its significance for women's emancipation was hotly debated, and subsequently also became a subject of much historical study. Because of the increased physical mobility, the bicycle would have significantly enlarged women's freedom, independence and habit of going out (thus breaking down their social isolation). Moreover, the new vehicle would have contributed not only to women's liberation from constrictive dress codes, but also to improving their health and to more informal forms of interaction, notably between the sexes. Recent studies, however, have qualified the contribution of bicycles to women's emancipation. It is observed, for example, that women were pressured to develop a specific feminine style of bicycling that met bourgeois standards of decency. Bicycling by women broke down the prevailing gender role patterns only to a limited extent and was often adjusted to prevailing normative views on female conduct.²⁵

Recent literature draws attention to the role of cycling in the emergence of mass tourism and its interrelated contribution to the changing dynamic between city and countryside – themes directly relevant for mobility history.²⁶ The bicycle provided middle-class citizens with sufficient time, energy and money, the opportunity to escape urban bustle, polluting and noisy industry, as well as the monotonous routines of daily (office) work.²⁷ Bicycle tourists idealised the purity of nature and the simplicity of rural life, simultaneously valuing predictability, urban comforts and also safety, given that rural folk would sometimes respond with hostility to cycling strangers. In time, the spread of facilities such as hotels, inns, (youth) hostels, cafés, information points and repair shops along popular routes gave rise to 'urban corridors' in the countryside.²⁸ Cyclists' organisations were also central to the development of paved and macadamised road networks.²⁹ Despite idolisation of the countryside's unblemished 'nature', bicycling thus contributed to its urbanisation.

²⁴ See e.g. D. Pye. *Fellowship is Life. The National Clarion Cycling Club 1895-1995* (Bolton: Clarion Publishing 1995).

²⁵ See, for example, D. Bleckmann, *Wehe wenn sie losgelassen! Über die Anfänge des Frauenradfahrens in Deutschland* (Gera-Leipzig: Maxime-Verlag, 1999); P. Marks, *Bicycles, bangs, and bloomers: the new woman in the popular press* (Lexington, KY 1990), notably 175-203; E. Gruber Garvey, *The adman in the parlor: magazines and the gendering of consumer culture, 1880s to 1910s* (New York 1996), notably 106-134; B. Edwards, 'The cycling New Woman. The representation of the cycling New Woman in the English popular press 1895-1897', *Cycle History* 8 (1997), 67-74; P.G. Mackintosh and G. Norcliffe, 'Men, women and the bicycle: gender and social geography of cycling in the late 19th century', in Cox, Horton & Rosen, *Cycling and Society*, 47-65.

²⁶ J. Urry, *The Tourist Gaze* [2nd edition] (London: Sage 2002).

²⁷ See R. Holt, 'The bicycle, the bourgeoisie and the discovery of rural France, 1880-1914', *International Journal of the History of Sport* 2 (1985), 127-139; C. Bertho-Lavenir, *La Roue et le stylo. Comment nous sommes devenus touristes* (Paris: O.Jacob, 1999).

²⁸ See G.A. Tobin, 'The Bicycle Boom of the 1890s: The Development of Private Transportation and the Birth of the Modern Tourist', *Journal of Popular Culture* 7 (1974), 838-849.

²⁹ See e.g. G. Mom, 'Road Building in The Netherlands, 1810-1980' in G. Mom & L. Tissot (eds.), *Road History: Planning Building and Use* (Neuchatel: Editions Alphil 2007) 33-62.

Various authors have also demonstrated that bicycle tourism strengthened national unity and identity.³⁰ English, American, French, German, Italian and Dutch bicycle and tourist associations, set up between 1878 and 1894, linked bicycling with specific nationalist and middle-class ideals of civilisation. As special interest organisations they propagated the discovery of typical regional landscapes, an assumed unspoiled countryside, and national heritages. Bridging gaps between city and country and between different regions bicycle touring reinforced national unification. Furthermore, the first local and national bicycle organisations promoted particular ideals of liberal-democratic citizenship as well as of the nation, centred on achieving a balance between individual liberty, self-control and social responsibility. The latter was expressed, for instance, in pleas for standardised and uniform traffic rules on a national scale, depicting bicyclists as decent traffic participants with the same rights as others.

The connection between the bicycle and national identity is exemplified by German historian Anne-Katrin Ebert in her recently published dissertation on the comparative history of bicycling in Germany and the Netherlands between 1870 and 1940.³¹ Ebert queries the disparity between patterns of bicycle use in the Netherlands and Germany and stresses the role of collective ideas and images associated with the bicycle. In Germany, it was initially valued and promoted among the middle class for both its speed and as an instrument of social change. As cycling spread among the working populace it was abandoned by the middle classes in favour of the faster (and more exclusive) automobile. In contrast, the influential Dutch cyclists' (later tourists') organisation ANWB successfully promoted the bicycle in the Netherlands as a common national symbol because of its 'character building' qualities, as a means to discover the beauty of the country and to unite the different regions. The ANWB presented the bicycle as an instrument to discipline and educate the masses: to impose civilised, bourgeois and national values upon them. This specific evaluation of the bicycle contributed to the 1905 ban on road racing in the Netherlands and to the construction of recreational bicycle paths, which were internationally famous by the 1930s. Most importantly, public images of the bicycle forged a link between the bicycle and Dutch national identity which may further explain why the Dutch stuck more tenaciously to their bicycles than other European nations after World War II.

Concluding remarks

Several aspects of recent research in bicycling history noted here seem especially worthwhile of further exploration and elaboration. First, the important role of collective ideas and public images of cycling in motivating transport choices. Second, and closely related, the role of cycling interest organisations in representing and promoting such

³⁰ See, for instance, Bertho-Lavenir, 'L'échappée belle', in: idem and Vallet, *La bicyclette*, 117-129; idem, *La Roue et le stylo*, 102-103, 130; R.J.B. Bosworth, 'The Touring Club Italiano and the nationalisation of the Italian bourgeoisie', *European History Quarterly* 27 (1997), 371-410; P. Gaboriau, 'The Tour de France and cycling's Belle Epoque', *International Journal of the History of Sport* 20 (2003), 57-78; David Rubinstein, 'Cycling in the 1890s', *Victorian Studies* 21 (1977), 47-71; Rabenstein, *Radspport und Gesellschaft*, 200-223.

³¹ A.-K. Ebert, *Radelnde Nationen. Die Geschichte des Fahrrads in Deutschland und den Niederlanden bis 1940* (Frankfurt: Campus, 2010); see also A.-K. Ebert, 'Cycling towards the nation: the use of the bicycle in Germany and the Netherlands, 1880-1940', *European Review of History* 11:3 (2004), 347 - 364.

ideas.³² Third, the relevance of governmental policies concerning the bicycle and their relationship with both collective ideas and pressure groups. Lastly, the work of both Bruhèze and Veraart and of Ebert testifies to the value of comparative approaches in cycling history.

If recent histories of bicycling suggest new concerns and approaches, they also leave certain issues unaddressed. Apart from several studies of the earliest history of the bicycle in the days of the draisine and velocipede, the majority of publications focus on the period prior to 1900. The inter-war period, when cycling became mass transport, is less scrutinised, and even fewer studies examine the second half of the twentieth century. One reason for this may be that it is more difficult to use the modernisation perspective on the bicycle, so prominent in the international literature, for more recent twentieth-century history when motorised traffic – automobiles in particular – was seen to embody modernity in transportation.³³

Many historians who link the bicycle to modernity around 1900 do so against the backdrop of the rise of motorised traffic after 1900 and the decline of bicycle use in countries such as the United States and, (much) later, Britain, Germany and France. Yet the 'substitution thesis' raises pertinent questions. In America, the bicycle never became a mass means of transportation in the first place.³⁴ At the other end of the scale, the Dutch and Danish mobility history of the twentieth century underscores that there was no straightforward substitution of bicycles by cars. And the same can be concluded when looking at the revival of bicycle use and the rise of bicycle policies in many western countries since the 1970s - parallel to the continuously increasing use of the car.³⁵

In transport history, therefore, the bicycle should be presented in other roles than only that of 'precursor of the car'. It needs also to be analysed historically as an urban alternative next to the car and other modes of transportation, and as a vehicle for exercise and recreation in its own right. Now that even present day transport economists are responding to requests to investigate the financial costs and benefits of cycling for society today, it seems fitting for transport historians to think of ways to analyse the historical significance of the bicycle in making society mobile and to further investigate the diverse factors that contribute to the varying popularity of the bicycle as means of transport in different countries.

³² See also A. Poyer, *Les premiers temps des veloce-clubs: apparition et diffusion du cyclisme associatif français entre 1867 et 1914* (Paris: L'Harmattan, 2003); T. Burr, 'A comparison of national bicycle organizations in Britain, France, and the United States, 1878-1910', *Cycle History* 18 (2007), 34-42.

³³ The same narrative of modernity may explain the dearth of studies on bicycle use outside of Europe, despite the high contribution that cycles and rickshaws have made, and continue to make, to Asian cities. An exception is R. Gallagher *The Rickshaws of Bangladesh* (Dhaka: University Press Limited, 1992).

³⁴ P. Rubenson, 'Missing Link: the Case for Bicycle Transportation in the United States in the Early 20th Century', *Cycle History* 16 (2005) 72-84.

³⁵ See except for Bruhèze & Veraart, *Fietsverkeer*. John Pucher and Ralph Buehler, 'Making Cycling Irresistible: Lessons from the Netherlands, Denmark and Germany', *Transport Reviews* 28(2008) 495-528.