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Historical factors for better cycling

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What are the main research deficits when it comes to the history of cycling for transport?

Unlike motorized transport modes, or competitive cycling, the bicycle as a transport mode has focused little historical research, at least in France.

The most important prerequisite for such research is to gather all available sources relating to cycling for transport¹. The bicycle fleet is well known from the *velocipede tax* records from 1893 to 1959, even if in the last years fraud was higher; for more recent years, only surveys give data. The bicycle production and sales are well known from the bicycle industry². Bicycle costs can also be provided by the bicycle industry or through users' surveys. Bicycle traffic is available from road counting only on some roads, mainly national highways, and more recently on certain thoroughfares in large cities. For example, in 1903, per day, 31.8 velocipedes, as compared to 1.1 motorcycle, 7 mechanic traction cars, 251.4 animal drawn cars, and 131.9 animals were numbered on average on national highways³. Bicycle accidents data (number of accidents, bicycles involved, injured cyclists, fatalities) have been well recorded for a long time⁴: it was computed after a survey as early as 1903 that 90 persons per year were then killed by the action of cyclists⁵. Bicycle trips can only be known after household surveys. Surveys may also ask for bicycle opinions. Other data on bicycle infrastructures, public investments for bicycles, or bicycle regulations can be found in national or local administrations. Finally, the inventory of the bicycle vocabulary used over time by different bodies tells a lot about the way the bicycle is perceived and managed.

The second axis is to investigate all written sources describing the use of the bicycle, in a qualitative way. If historical quantitative data are essential to provide the size of the phenomena studied, historical qualitative data help at investigating areas where quantitative data are lacking. Newspaper articles, narratives describing the experience of the people who lived the bicycle in different periods, studies, research reports, or court rulings may shed light on the social object that the bicycle was in the past.

The third idea is to design biographic surveys to ask people their souvenirs about how they travelled in the past, in their childhood, and how their parents and other people travelled. As travel surveys have only been implemented since the 1960's, the investigation of travel behaviour before must rely on people's memory. Biographic surveys were implemented in particular in the United Kingdom⁶ and in France⁷.

What can historians say about the factors that determined the rise and decline of cycling for transport in the past?

Once the data are here, a number of researches can be made to relate the use of the bicycle to a number of factors. For example, with the biographic data, the following questions can be answered: how is the use of the bicycle linked to individual experience? Or how is it linked to period specific conditions? The biographic data can foster longitudinal analyses, i.e. how the same individual has changed his/her behaviour over time according to specific circumstances (home location, school, job, household composition, car ownership etc.), and historical analysis i.e. the overall change at the national level in bicycle use, by filling the gap before the first travel surveys. According to our research, bicycle use in France peaked in the 1930's and 1940's between 16% and 32% of all modes as the main travel mode stated by one individual for one

year⁸. Orselli⁹ estimates that the bicycle formed 13 % in 1903, 27 % in 1913, 35 % in 1921, and 27% in 1934, of traffic on all road networks (excluding pedestrians).

This historical maximum occurred in all European countries: a Dutch study¹⁰ on bicycle development since 1900 in four Dutch cities and five other western European cities evidenced this maximum circa 1940 at about 24% in Basel, 33% in Manchester, 53% in Copenhagen, 66% in Antwerp, 45% in Hanover, 83% in Amsterdam, 95% in Enschede of all mechanized trips.

Indeed, an important issue is to develop comparative analyses between cities and between countries. Historians can study the policies that favoured or deterred the use of the bicycle in the past, but also the social consideration for this transport mode. At the very beginning (in the 1890's) there was a strong popular opposition to cyclists¹¹: it is interesting to investigate how this opposition evolved over time. However, the economic conditions made the bicycle a popular transport mode in the 1930-1955 period. The role of the development of powered two-wheelers and automobile should be sifted¹², including policies to accommodate them, but also the resulting unsafe traffic conditions for cyclists¹³.

What role did cycling activists, politicians, traffic planners, the bicycle industry and the 'common cyclists on the street' play?

The historians should not stop at the fall of the bicycle: the recent renewal in Europe is worth a visit. There are country specific situations; in France, it was mainly the bicycle activists who triggered pioneering municipalities to start a cycling policy. For example, in Paris, there was no cycling policy until the first cyclist demonstration 22 April, 1972, the creation of the *Mouvement de Défense de la Bicyclette* (MDB) in 1974, Jacques Essel's accident in 1982; then the municipality decided to paint green strips *within* existing traffic lanes, that were rapidly called "death corridors". The city of Paris has really initiated a cycling policy only since 1994¹⁴.

In fact, planners, consultants, city technicians, and elected official lagged behind cyclists' organizations. Twenty years ago, the bicycle was not considered as a transport means by public policies in France. Technical skills of local governments were vanishing. The cyclist local service business network was fading away as big stores were developing. In those circumstances, it was not surprising that bicycle use was decreasing. However, the rare remaining cyclists, by organizing themselves in associations, by advocating the right to go on cycling, are those who gradually made the system alter until the reversal in trend. The first municipalities that listened to them, beginning with Strasbourg, now express satisfaction with it. Only gradually, after trials and errors, the bicycle technical skills of cities have been built again. Including the national state that now proposes a *national cycling policy*¹⁵.

The bicycle industry, being mostly relocated in Asia, has little might. The automobile industry has more power, and tries to take benefit of the bicycle fashion.

How can historians investigate how 'hard facts' such as city density, affordability of bicycles, political decision-making and traffic planning intertwine with supposedly 'soft facts' such as social acceptability of cycling and the cultural meaning of cycling in general?

The best way to sort out different factors is to estimate econometric models. They can be static models, or dynamic models based on time series. But they require appropriate data.

Anyway, a multidisciplinary approach is needed, mixing historians with geographers for urban development factors, with economists for relative costs of travel for different modes, with political scientists for policies and regulations, with sociologists for social norms, and attitudes to cycling, with psychologists for the perceptions of cycling and maybe with others.

Just as an example, sociologists have focused on the bicycle from the very beginning. As soon as 1900, Eduard Bertz¹⁶ studied the success of the bicycle in the population, and in particular showed its role in women's emancipation.

In the 1970's bicycle representations and practices were investigated¹⁷: blue collars did not consider the bicycle as a transport means; white collars used it for recreation, but little for commuting on status and safety grounds; only a minority of executives thought the bicycle was a way of life.

In 1992, the cultural origin of bicycle use and non-use was searched for¹⁸, and the following hypothesis was stated: "Cycling individuals received a *velocipedical socialization*", i.e. would have acquired their habits from relatives or groups to which they identified themselves.

In the years 2000, mentalities evolved, a little. The bicycle became an "innovation to be diffused"¹⁹. "The bicycle would start to raise in the individuals' value system"²⁰. However, if it has become a transport means, for many cyclists, it is "less often perceived as a thinkable alternative"²¹, because of its many bridles "dress code", "pollution", "theft", "traffic hazards and lack of infrastructure", "dissuasion by relatives and friends". But for bicycle users, "bicycle constraints are compensated by fun and freedom"²². Moreover, "the bicycle would re-create social links. Cyclists would give out sympathy and friendliness"²³.

How can historians assess the importance of bicycle lanes in the promotion of cycling?

All attitudinal research²⁴ shows that non-cyclists and cyclists ask for more and better bicycle infrastructures to start cycling or cycle more. This is one factor that should be included in the historical analysis. It is also an important factor for cycling as a feeder mode to public transport²⁵. But the types of facilities should be discriminated. And other factors, such as parking at stations, and in buildings should also be considered.

Maybe, there are two interesting sub-questions about bicycle lanes in history. On the one hand, how did they physically contribute to the improvement of cycling? Was there an effective evaluation process, feedbacks from users? Did they attract more cyclists because they were objectively safer and more convenient? On the other hand, what was the role of cycling lanes in the debate between cycling advocates, technical staff, elected officials and the general public? Was it a central issue, or a side concern? And is there a general worldwide law, or are there place specific situations?

¹ Papon, F. (2012) The evolution of bicycle mobility in France. Proceedings of the 22nd *International Cycling History Conference*, Paris, 25-28 May, 2011 (to be published)

² *Chambre syndicale* then CNPC from 1890

³ Barles, S., Jardel, S., Guillerme, A. (2004) *Infrastructures de transports routiers, Parcs et trafics automobiles, France, 1900-1970 : étude exploratoire*. Research report for INRETS. 86 p

⁴ ONISR from 1982

⁵ Orselli, J. (2009) *Usages et usagers de la route, mobilité et accidents 1860 – 2008*. Conseil général de l'environnement et du développement durable. Rapport n° 2005-0457-01. Tome 1, p.71, tableau 15

⁶ Pooley, C.G. & Turnbull, J. (2000) Modal choice and modal change: the journey to work in Britain since 1890. *Journal of Transport Geography* 8 (2000) 11-24

⁷ Papon, F., Marchal, M., Roux, S., Marchal, P., Armoogum, J. (2010) *Parcours individuels et histoire de la mobilité. Analyse du volet " biographie " de l'Enquête Nationale sur les Transports et les Déplacements 2007-*

2008. Rapport final de la convention Adème-Inrets n°08 66 C0068 du 15 juillet 2008 modifiée par avenant n°1 08/DTM/668/PC/MF du 21 novembre 2008. 203 p

⁸ Papon, F. (2012) *op. cit.*

⁹ Orselli, J. (2009) *op. cit.* tome 1, p.134

¹⁰ Albert de la Bruhèze, A. A., Veraart, F.C.A. (1998) *Fietsverkeer in praktijk en beleid in de twintigste eeuw. Overeenkomsten en verschillen in fietsgebruik tussen Amsterdam, Eindhoven, Enschede, Zuidoost-Limburg, Antwerpen, Manchester, Kopenhagen, Hannover en Basel.* Sitichting Historie der Techniek, Enschede/Eindhoven, Rijkswaterstaat-series n°61, The Hague, 1999

¹¹ Orselli, J. (2009) *op. cit.* tome 1, p.327

¹² Héran, F. (2012) *Vélo et politique globale de déplacements durables.* Convention Prédit n° 09/243. 114 p.

¹³ Carré, J.R., Legrand, H., Voltz, A.Y. (1989) *Morphologie sociale des risques accidentels dans les transports, partie 1 - la mobilité des Français et l'exposition aux risques - Constitution d'une base homogène de données à partir d'une ré-exploitation de l'enquête "Transport" 81-82 de l'Insee - Inrets -rapport sur convention DTT / Inrets-Cresta pp. 23-24*

¹⁴ Flonneau, M. (2008) 1996-2008 Douze ans de politique cyclable à Paris. *Colloque 12 ans du vélo.* Paris 19 janvier.

¹⁵ Goujon, P. (dir.) (2012) *Plan national vélo* établi par le groupe de travail pour le développement de l'usage du vélo. Présenté à Thierry Mariani, ministre des transports, à Paris, le 26 janvier 2012. 31 p.

¹⁶ Bertz, E. (1900) *Philosophie des Fahrrads.* Dresden und Leipzig 1900. Korrigierter Neusatz Hildesheim 2011, Olms.

¹⁷ Averous, B., Coulon, A., Durand, J. (1977) *Recherche sur une nouvelle pratique du deux roues dans différents groupes socio-culturels.* Rapport du Bétérem pour le secrétariat d'état aux transports DGRST. 156 p

¹⁸ Adav, Airab (1992) *Lillàvélo, étude sur les conditions et les enjeux, d'une transformation de Lille en ville cyclable.* Rapport final pour l'Observatoire Communautaire de l'Environnement (Communauté Urbaine de Lille), octobre 1992, 53 p

¹⁹ Rocci, A. (2003) *La place du vélo dans le système de mobilité urbain.* Mémoire de DEA de l'université Paris V, sous la direction de Dominique Desjeux.

²⁰ Rocci, A. (2007) *De l'automobilité à la multimodalité ? Analyse sociologique des freins et leviers au changement de comportements vers une réduction de l'usage individuel de la voiture. Le cas de la région parisienne et perspective internationale.* Thèse de doctorat de l'Université de Paris V René Descartes (direction Dominique Desjeux), p. 43

²¹ Rocci, A. (2007) *op. cit.* p. 84

²² Rocci, A. (2007) *op. cit.* p.91

²³ Rocci, A. (2007) *op. cit.* p. 102

²⁴ Eriksson L. (2009) *A psychological perspective on factors important for bicycle use. A literature review.* VTI 30 p. (in Swedish)

²⁵ Soulas C. (dir.) (2011) *Projet Prédit Port-Vert. Plusieurs Options de Rabattement ou Transfert Vélo et Réseaux de Transport. Approche multi-aspect des diverses formules d'intermodalité.* Rapport final Prédit. mars 2011. 712 p + annexes.