A case in the field of mobility and transport: the Autolib' car-sharing platform

Marion Drut

DEGROWTH & STRATEGY

how to bring about social-ecological transformation

Edited by Nathan Barlow, Livia Regen, Noémie Cadiou,
Ekaterina Chertkovskaya, Max Hollweg,
Christina Plank, Merle Schulken and Verena Wolf

Published by Mayfly Books. Available in paperpack
and free online at www.mayflybooks.org in 2022.

ISBN (Print) 978-1-906948-60-3
ISBN (PDF) 978-1-906948-61-0
ISBN (ebook)978-1-906948-62-7

Cover art work by Dana Rausch who retains the image copyright.
Layout by Mihkali Pennanen.

A case in the field of mobility and transport: the Autolib' car-sharing platform

By Marion Drut

Vehicle sharing exists at the intersection between private cars and public transport. Such initiatives have multiplied over the last decade with growing citizen participation (Firnkorn and Shaheen 2016; Drut 2018; 6t-bureau de recherche 2019). Degrowth calls for more collective property and sharing (Jarvis 2019). Vehicle sharing offers the potential of wider processes of social-ecological transformation, propelled by two drivers of change. First, sharing vehicles means fewer vehicles will be needed in the economy to meet the same level of needs. The second lever is the demotorisation that it causes. Estimates of several case studies throughout Europe and Canada highlight a decrease in the distance travelled by drivers enrolled in a car-sharing system from 11 to 50% (Sioui *et al.* 2013, Meijkamp 2000). This chapter analyses to what extent the experience of the Autolib' platform, a one-way station-based car-sharing system[38] in Paris, can be a potential strategy towards degrowth. As such, the case study is necessarily limited to a Western context.

The Autolib' platform

The Autolib' project was first conceived in early 2008 by Bertrand Delanoë, leftist mayor of Paris, as a follow-up to the bicycle-sharing Velib' system set up in Paris in 2007. The main objective was to reduce car ownership in the Paris region. As more Autolib' cars are available for public use, at a fair price and with dedicated parking spaces, car drivers are encouraged to abandon their privately owned cars. The issue of parking spaces is of particular concern in densely populated areas such as the Paris urban area. According to official communication, each Autolib' car would replace 10 cars. The secondary objective was to substitute fossil fuel cars for electric cars

38 Vehicles can be driven back to any station.

in order to cut down CO_2 emissions. Setting up a large-scale car-sharing system was thought of as one possible project to achieve a low-carbon mobility strategy in the Paris urban area.

The Autolib' platform was a public car-sharing service implemented in December 2011 and closed in July 2018. The platform offered a fleet of almost 4,000 electric cars spread over 1,100 stations located in 103 municipalities (Paris and its surroundings). Autolib' cars were available for public use on a spontaneous basis (subscription effective immediately) and at a quite low price.[39] The Autolib' platform was operated by the Autolib' company, a subsidiary of the multinational transportation company Bolloré, through a public service delegation contract (public-private partnership) covering the period from December 2011 to the end of 2023. It employed 500 workers.

Autolib's successes and failures

The Autolib' platform showed mixed results. In the short run, the achievement of the initial objective (decrease in car ownership rates) was questioned by a study from the City of Paris published two years after the implementation of the platform (Razemon 2013). Although Autolib' targeted existing car drivers, 60% of Autolib' drivers did not own any car and mainly used public transport, and, even worse, 18% of Autolib' drivers seemed to get used to automobility and considered buying a car in the future. Among the 40% of Autolib' drivers who did own a car, only a third had considered selling it. An explanation for this failure is that the Autolib' platform operated mainly in the city centre: 700 out of the 1,000 Autolib' stations were located in Paris. Autolib' was a transport mode mainly used by Parisians moving within Paris, and used only to a lesser extent in the suburbs. In the city centre, alternative modes are available like public transport, cycling and walking. Consequently, Autolib' competed not

39 The cost includes an annual subscription (120 € in 2017) and a variable cost increasing with the time spent using the car (6 € for each 30 minutes), or a fixed reservation cost of 1 € and a variable rate of 9 € for each 30 minutes for occasional drivers.

only with private cars, but also with more sustainable transportation modes. Second, the potential of attracting non-car users to using cars is particularly strong when car ownership rates are low because there is a greater proportion of potential new drivers: only 37.4% of Parisians owned a car in 2013 (INSEE 2013). As suggested by the experience of other car-sharing systems, car-sharing would have created more desirable outcomes if operated in peri-urban locations where car ownership rates are higher and where low-carbon transport alternatives are scarcely used.[40]

On the other hand, a study published in 2014 by an independent consulting firm providing expert services on transport policies showed different results. They clearly observed a 23% decrease in the number of private vehicles owned by Autolib' users after their subscription to the car-sharing system (6t-bureau de recherche 2014). According to the study, an Autolib' vehicle replaces three private cars and frees two parking spaces. In addition, after subscribing to the platform, an Autolib' driver travels 43 km less per month compared to before, which corresponds to an 11% reduction in the vehicle-kilometre travelled (both from their private car and the Autolib' car) (*Ibid.*). This reduction in mileage does not occur because Autolib' drivers travel less, but rather because they tend to shift to other mobility modes, like public transport and walking (Louvet 2018). 13% of Autolib' drivers used their private car daily before subscribing to the platform, against 5% after their subscription, indicating a 63% decrease in daily private car use (*Ibid.*). Other transportation modes used daily by Autolib' users saw a much smaller decrease. Car sharing builds on long-term changes in mobility patterns towards low car-usage lifestyles, and lower car ownership rates (Firnkorn and Shaheen 2016; Martin and Shaheen 2010; Meijkamp 2000). The Autolib' platform competed primarily with private motorised modes – that was one of its successes. Another

40 Mobizen, now Communauto, a car-sharing system mainly used by Parisians to go outside the city centre, showed a higher shift from private cars (6t-bureau de recherche 2014): the share of drivers using their private car daily decreased by 93% after subscribing, while the share of most alternative modes increased from 30% for bicycle-sharing to 2–4% for walking and public transport. Only the daily use of private bicycles slightly decreased (–6%).

success of the project was the effective sharing of cars: each Autolib' car was used on average between 3 and 5 times a day (Louvet 2018). All other things equal, meeting the same level of mobility needs with both fewer vehicles and lower car usage reflects a wider process of social-ecological transformation.

Last but not least, the Autolib' company claimed a 50 million annual loss in 2018 and forecasted future yearly losses that went beyond what the Autolib' firm had agreed to support. This situation was in conflict with the engagement of the municipalities to provide a no-cost public service for their citizens and resulted in the termination of the contract and the end of the Autolib' service. One reason – probably not the only one – for these losses was the decreasing number of Autolib' users (150,000 subscribers but only 11,000 trips a day in 2018), due to the rise of private hire services and of free-floating bicycles and motor-scooters (Farge 2018). The quick end of this project due to financial reasons shows another kind of failure as well. Private industrial stakeholders seek short term monetary profits and may not settle for long term non-economic benefits. Profitability is usually not a criterion – much less a purpose – for public services, for instance, public transport. Rather, social utility is central. Considering social and environmental costs and values as well may have led to a more desirable scenario. A social-ecological transformation would benefit from cooperation rather than competition. As they become capitalised and institutionalised, vehicle sharing systems must comply with capitalist and institutional requirements. This may contribute to, even hasten, their fall – as described in the Autolib' case study.

In conclusion, the Autolib' project experienced mixed results, with failures such as encouraging people to become drivers and operating an inadequate business model that led to the end of the initiative, and also limited successes – but still successes – in demotorising Autolib' drivers who owned private vehicles, and by proving that large-scale use of shared cars was a possible mobility option at the level of an urban area (Louvet 2018).

Autolib': A symbiotic strategy based on a ruptural element

Cars are overwhelmingly the dominant mode of transport in western societies, including in cities where many alternative travel options are provided, from public transport to cycling and walking. The car is used for 83% of passenger-kilometres in the European Union in 2018 (Eurostat 2021) and for 63% of trips in France (France. Ministère de la transition écologique 2020). Western societies are still embedded in private individual automobility, where individual cars often remain a genuine societal cult object which conveys symbolic representations. The observed reduction in car use reflects a change in the relation the driver has to the vehicle. The shift is from owning to accessing, from individual to collective, from monetary exchange value to social use-value.[41] Nikolaeva *et al*. (2019) define the concept of "commoning mobility", based on the idea that mobility is not only a question of individual freedom but can be considered as a collective good, ie. as a common. Shared mobility allows – forces – us to have a systematic approach to mobility and encourages a logic of commoning. Vehicle sharing thus entails a ruptural element at the individual level as it disrupts and opens up a space that is inherently individualistic.

The Autolib' project involved powerful actors: the Bolloré company and the City of Paris. The former, as a private firm, was seeking short term profit while the latter, as a public body, was aiming to reduce car ownership. Such a compromise between private actors whose concerns drastically diverge from degrowth and others who support degrowth objectives, although not explicitly, falls within what Erik Olin Wright (2010) calls a symbiotic transformation. The Autolib' example highlights that symbiotic transformations have features that can either lead to success (powerful actors have the potential to be heard and followed) or failure (private actors are profit-seekers and their core beliefs and objectives contradict degrowth). Pushing such transformations towards success is a hard task.

41 Using a shared vehicle rather than a private one creates benefits not only for the driver but also for others in society (ie. through reduced congestion).

Towards social-ecological transformation: a road paved with challenges

Presenting a car-sharing project as a degrowth strategy for mobility is challenging. Indeed, car-sharing as it is currently experienced and implemented has the impression of being far from desirable social-ecological transformation. To my mind, however, shared mobilities convey a ruptural element at the individual level and therefore have the potential to lead to broader and more desirable social-ecological transformation. Fostering commonly shared mobilities – including automobility – can represent a transition towards degrowth. However, when strategising for degrowth and following a symbiotic strategy, one must take care not to jeopardise degrowth's aims (sufficiency, social justice, ecological justice, commoning, well-being etc.). Autolib' was not a satisfactory degrowth strategy. Indeed, although the Autolib' project induced long-term changes in mobility patterns towards low car-usage lifestyles, outcomes were limited and subject to criticism.

Deep knowledge of the local context appears decisive, although not sufficient, to engage citizens. Autolib' was operated in the Paris region only, in partnership with local authorities, but failed to engage local stakeholders on a long-term basis.

Another core limit to vehicle-sharing as a degrowth strategy is the positioning of stakeholders. Operators of car-sharing platforms (private or public bodies) generally do not identify with degrowth, although the initial objective, car reduction, overlaps with degrowth objectives. Nonetheless, several studies highlight the ecological convictions of shared vehicle users (Kawgan-Kagan 2015; Schaefers 2013). This limit can turn into an opportunity: successful degrowth-oriented projects would multiply if stakeholders identified with degrowth and conducted strategies explicitly in line with degrowth principles.

References

6t-bureau de recherche. 2014. *One-Way Carsharing: Which Alternative to Private Cars? Executive Summary*. Angers, France: ADEME.

6t-bureau de recherche. 2019. *Enquête nationale sur l'autopartage – Edition 2019, final report*. Angers, France: ADEME.

Drut, Marion. 2018. "Spatial Issues Revisited: The Role of Shared Transportation Modes." *Transport Policy* 66, 85–95.

Eurostat. 2021. *Modal Split of Passenger Transport*. Eurostat Data Browser. https://ec.europa.eu/eurostat/databrowser/view/t2020_rk310/default/table.

Farge, Loïc. 2018. «Paris : le modèle Autolib' est-il mort ?» *RTL*, June 5, 2018. https://www.rtl.fr/actu/economie-consommation/paris-le-modele-autolib-est-il-mort-7793640458

Firnkorn, Jörg. And Susan Shaheen. 2016. "Generic Time- and Method- Interdependencies of Empirical Impact-Measurements: A Generalizable Model of Adaptation-Processes of Carsharing-Users' Mobility-Behavior over Time." *Journal of Cleaner Production* 113, 897–909.

INSEE. 2013. *Taux de motorisation des ménages*. Institut national de la statistique et des études économiques. https://www.data.gouv.fr/fr/datasets/taux-de-motorisation-des-menages/.

Jarvis, Helen. 2019. "Sharing, Togetherness and Intentional Degrowth." *Progress in Human Geography* 43, no. 2: 256–275.

Kawgan-Kagan, Ines. 2015. "Early Adopters of Carsharing with and without BEVs with Respect to Gender Preferences." *European Transport Research Review* 7, no. 33: 1–11.

Louvet, Nicolas. 2018. *Autolib' : puisqu'un service public n'a pas vocation à être rentable, quelle est son utilité sociale ?* 6t bureau de recherche. https://6-t.co/rentabilite-ou-utilite-sociale-autolib-fevrier-2018/.

Meijkamp, Rens. 2000. "Changing Consumer Behaviour through Eco-Efficient Services: An Empirical Study on Car Sharing in the Netherlands." PhD thesis, Delft University of Technology.

Nikolaeva, Anna, Peter Adey, Tim Cresswell, Jane Yeonjae Lee, Andre Nóvoa, Cristina Temenos. 2019. "Commoning Mobility: Towards a New Politics of Mobility Transitions." *Transactions of the Institute of British Geographers* 44, no. 2: 346–360.

Razemon, Olivier. 2013. «On a raté l'objectif. Autolib' ne supprime pas de voitures.» *Le Monde*, March 26, 2013. https://www.lemonde.fr/blog/transports/2013/03/26/

on-a-rate-lobjectif-autolib-ne-supprime-pas-de-voitures/.

Schaefers, Tobias. 2013. "Exploring Carsharing Usage Motives: A Hierarchical Means-End Chain Analysis." *Transportation Research Part A: Policy and Practice* 47, 69-77.

France. Ministère de la transition écologique. 2020. *Enquête mobilité des personnes 2018-2019*. https://www.statistiques.developpement-durable.gouv.fr/comment-les-francais-se-deplacent-ils-en-2019-resultats-de-lenquete-mobilite-des-personnes.

Sioui, Louiselle, Catherine Morency, Martin Trepanier. 2013. "How Carsharing Affects the Travel Behavior of Households: A Case Study of Montreal." *International Journal of Sustainable Transportation* 7, 52–69.

Wright, Erik Olin. 2010. *Envisioning Real Utopias*. London, New York: Verso.