Theme 7: Walking and cycling as complementary to public transport

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In recent decades, the habit of chaining activities has developed considerably, as the distances travelled in daily life have increased. This has led to a strengthening of multimodal and intermodal practices and turned walking and cycling into modes that are used to access public transport.

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Cycling and walking: literature review – Walking and cycling as complementary to public transport

In this world of movement, places that can be traversed by pedestrians and cyclists present opportunities to serve as meeting points, to carry out some of the many microactivities of daily life, or simply to find entertainment or clear one's head. Interchange stations thereby take on a new dimension. Train stations and public transport stops that are designed to optimise flow, functionality and efficiency, become potential places of appropriation, so long as they ensure the traveller's comfort (Bourdin 2005). One of the challenges for the attractiveness of interchange stations is therefore to go from representing a time-distance (which needs to be reduced, to be neutralised) to a time-substance (a time that is sensitive, usable and individually valued) (Amar, 2004).

Many studies show, in various ways, that the transfer between means of transport is a critical moment during a trip, and that it is hard to make it an enjoyable one.

Time perception

Research conducted on functionally optimising interchange stations very often considers user behaviour in a strictly rational manner based on time and cost (Kaufmann et al 2000). As a result, a whole body of scientific literature has been developed on the perception of transferring. This research focuses on how the actor experiences his or her transfer from one means of transport to another: some studies examining the perception of waiting times (Kaufmann 1995) have shown that such situations in public transport are associated with users largely overestimating travel times, due to the boredom they experience while waiting. However, the extent of this overestimation depends both on the waiting conditions and on the mode of transport — with train users perceiving much longer waiting times.

In a review of the quality of pedestrian access to public transport stops, Helge Hillnhutter (2016) detailed the temporal questions related to multimodal journeys. According to her findings, public transport users spend around half of their travel time from door to door outside of a public transport vehicle (Brög, 2014). According to other researchers cited, users perceive the time they spend walking and waiting to be longer than the time spent riding a public transport vehicle (Walther 1973, Wardman 2004). Finally, pedestrian-friendly environments tend to increase the acceptable walking distance to the nearest transport stop by up to 70% (Peperna, 1982). Hillnhutter concludes that unattractive walking conditions reduce the value of public transport. Conversely, a favourable walking environment promotes public transport and also encourages walking.

The first and last mile

According to several studies, the daily use of different means of transport depends in particular on how good the accessibility is over the first and last mile, and this applies to public transport, to car traffic and parking conditions, to pedestrian paths and cycling infrastructures (Brisbois 2010, Munafò et al. 2012, Vincent-Geslin 2010). Given the desire to encourage travellers to move away from cars, this finding has been particularly useful in designing and zoning parking restriction policies, which have significant effects on modal practices.

Regarding soft mobility, some works have been produced on the first and last mile (Brisbois 2010). The idea is that walking is an essential link in a mobility chain, one that should be considered as such and that, consequently, the quality of the paths in neighbourhoods leading to public transport stops should be designed to encourage their use. Some even suggest that this concern for the quality of these continuities should extend into buildings, all the way up to each person’s front door (Sim 2019).

The bicycle, a vehicle that must not be left out

Marc Wiel (1999) considers the public transport user as a pedestrian, because many of the pedestrian’s characteristics remain unchanged while riding on a train, bus, or subway – whether that is being exposed to the environment through all the senses or carrying all of one's belongings on or near one's body. The ability to sit for a certain period of time is similar to the presence of a bench in the public space. The same cannot be said for the cyclist, who depends on a vehicle that can sometimes turn out to be cumbersome.

Thus, much thought has been given to cycling infrastructure and amenities to and from major public transport stops and interchange stations (train, tram, metro, etc.) and to bike parking facilities nearby (which ideally are covered and secure, like bike stations). The availability of high-quality bike parking facilities near public transport increases the use of both modes (Krizek and Stonebraker, 2011). In this regard, it should be noted that Buehler, Heinen and Nakamura criticise the general lack of scientific

literature on the subject of bicycle parking, which they identify as a “determining factor for current and potential cyclists” (2021).

In addition to these measures, in some contexts, it may be possible for cyclists to take their bike with them on public transport — to travel longer distances or to continue their journey in case of a breakdown or bad weather (Pucher, Buehler 2012 ch. 8). In Copenhagen, for example, subways and trains include large spaces for bicycles, free of charge. Some taxis are also equipped with bike racks, allowing an easy modal shift, if necessary. Several studies also show that the presence of a bike path near the home or workplace positively influences the practice of cycling (Moudon et al. 2005, Krizek et Johnson 2006). The quality of the network and the ease of use for cycling therefore play a crucial role in choosing this mode of travel. Nevertheless, more detailed studies on the obstacles or incentives in terms of planning relating to this modal choice should be carried out.

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Movement

Movement is the crossing of space by people, objects, capital, ideas and other information. It is either oriented, and therefore occurs between an origin and one or more destinations, or it is more akin to the idea of simply wandering, with no real origin or destination.

En savoir plus x

Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts.

En savoir plus x

Renate Albrecher et Sonia Curnier (20 March 2023), « Theme 7: Walking and cycling as complementary to public transport », Préparer la transition mobilitaire. Consulté le 17 December 2024, URL: https://forumviesmobiles.org/en/project/15824/theme-7-walking-and-cycling-complementary-public-transport

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