

1. Videos

Santiago de Chile and its brand-new Bus Rapid Transit system

By
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15 April 2014

Replacing chaotic private buses with a smooth new Bus Rapid Transit system seemed to be an ideal solution. But it also brought unforeseen problems.

I'd like to talk about the development of transport behaviour and mobility patterns in Santiago de Chile, more precisely how and why transport behaviour changed with the introduction of a completely new public transport system for the city. Why Santiago de Chile? It's actually a very interesting case study area with a look at the important transportation changes the city has gone through in the last decade. Before 2007 the city was characterised by two parallel existing systems, which had nothing to do with each other. On the one hand some few metro lines which were little used, not only due to a very limited network but also due to relatively high prices. On the other hand we had something very typical of many cities in developing countries and emerging economies: a completely deregulated bus system, which was characterized by a rich oversupply of many private operators offering services in the private buses. Of course this chaotic service was a source of frequent accidents, noise and pollution, but also somehow convenient for its users: people were just able to get out of the house, take the bus wherever they wanted, because there weren't any bus stops, and to cross the entire city in the same bus, just paying one single fare, and not changing between buses or from bus to metro.

Complete modernisation of the system

Anyhow, considering the noise and pollution and frequent accidents, and also the fact that more and more people tried to avoid taking this chaotic bus by going by private car if they had one, the public authorities decided to completely modernise the existing system and to introduce a so-called bus rapid transit system. This vocabulary describes a system where buses, similar to a metro or tram system, run entirely on their own corridors. They are high-capacity, very comfortable articulated buses, which can carry a lot of passengers. Normally a bus rapid transit system also includes, similar to a metro, a specific ticketing system and a specific sophisticated passenger information system. The so-called Transantiago system was also meant to be unified with the public metro in order to have a tariff union, so people should be able to transfer between both modes, just paying one single fare enabled by the electronic ticketing system. All this very ambitious, sophisticated system was implemented finally in February 2007 in Santiago. Maybe it's not that surprising that the situation at the beginning was very catastrophic because people were completely lost; the change was just too drastic and too abrupt all at once. The reasons for this were, on the one hand, related to a lot of technical failures, so the network was not very well designed at the beginning, not enough buses had been purchased, the bus lanes hadn't been constructed completely, etc. But it was also due to the fact that people were just completely

lost – they didn't know how to make use of the new system. And that's actually where my research started.

From 'Captive riders' to good access to cars

I wanted to see what exactly the problems were for the people, and what impact these problems had on their way to move within the city, so on the way they constructed their daily life and on the general organization of daily activities. For this purpose I selected five of the 37 different city districts, which are very different concerning their income situation, so low, medium, high average incomes, and also concerning their accessibility conditions. So some have access to the metro, some not, some depend exclusively on bus based transport, and – which is important to understand – especially the higher income areas often have very good access to the car, while the lower income areas, especially the periphery, normally depend exclusively on public transport. We call this 'captive ridership', which means that they don't have any alternative: they have to go by public transport.

A strong correlation between car ownership and high incomes

So obviously not all people experienced the problems in the same way. As I said, it really depended on how much people depended on the use of public transport. I prepared four maps where you see the 37 districts of the metropolitan area. Green always represents a low value and red always a high value, and you can see two main things: on the one hand you see a high correlation between the average incomes and the access to a private car, so private car ownership, and also the number of daily trips in private transport. On the other hand you also see that all the high-income people concentrate in one sector of the city, in the so-called eastern cone of wealth, which is highlighted in red colour, which demonstrates that Santiago is characterized by strong social segregation. People living there are in a double sense better off because on the one hand, they have good access to the private car, they don't depend on public transport, which means they have high mobility accessibility; but on the other hand, they are better off because in this area all important shopping, leisure, working and recreation facilities are concentrated, so they don't have to move far, even though they are more mobile than other people.

From technical issues to motility

The problems of Transantiago can be classified in two main groups: on the one hand, we have the so-called technical problems that I mentioned – the network, the bus lines, the bus stops, etc. Obviously these things didn't work very well at the beginning but the solutions are rather obvious, even though they take time and cost, the solutions were done substantially in the three years after the implementation of Transantiago. But there's also a whole palette of problems related to people's travel competencies, skills, habits and preferences. Those problems turned out to be much more long-lasting and difficult to resolve than probably the public authorities had expected in the beginning.

From 'muddling through' to a more sophisticated passenger information

So, just to take one example of people's travel competencies: it's the access to information on the transport supply. Before, during the deregulated system, people were really used to 'muddling through', to be informed about the supply in an informal way. They asked people they knew or they directly asked the bus driver in order to get to know how to get from door to door. Now, with Transantiago, it's a much more sophisticated system; it's based on a proper passenger information system, including network maps, including an internet platform, a telephone hotline, etc.

As you can see here on this graphic, independence of the level of education of people, lower educated people still rely, even on the Transantiago, on informal information sources, which is much more difficult now than during the deregulated system. And only the higher educated groups really make use of this internet platform and network maps, etc.

And, according to this, on a second chart, we also see that people themselves declare different easiness or difficulties to use the Transantiago. People with a lower level of education accordingly declare they find the Transantiago very difficult to use, while higher educated groups normally didn't have any problems, but in that sense you also have to see that those people rarely use public transport, so they don't depend on it, and evidently it's easier for them. This is just one example of problems in travel competencies. I could evoke numerous other examples. In general, to sum up, the problems refer really to the need now to organize the trip beforehand, so the need to charge your electronic ticket before entering the bus, to decide about the best connection, to access the correct transport stop and finally also to do transfers. Transfers are a universal phenomenon: to change between modes is always something that is not really liked by people. Also here in Europe, people often prefer to stay longer in the same vehicle in order to avoid transferring between modes instead of really having a short trip but changing once or twice between the different modes.

Captive riders travel less and avoid motorized transport

That's about the problems. I'd still like to talk about the impact this problematic transport system had on people's daily life. In my survey, about 12% explicitly justify to have changed their travel patterns and their daily travel behaviour due to problems with the Transantiago. These people were especially, again, 'captive riders', which are mostly lower income people, without access to a private car, elderly, and also many women, because women still don't always have a driving licence in Santiago de Chile. Those people, first of all they travel less, especially for leisure purposes, which means now many trips, especially for leisure purposes, that they used to do during the deregulated system they just have skipped, and they prefer to stay at home; they travel shorter distances, which means they remain more often close to their place of residence, where they can walk or cycle to, in order to avoid motorized transport.

Increase of the private car use

And third, in the context of modal splits, of the share of the different modes used by the inhabitants of Santiago de Chile, we see that private car use has considerably increased. Of course bus use has now been replaced in an important part by the metro because the metro network is expanding, and, thanks to the tariff union, people have better access to the metro, but also by private cars and also by taxis. This, from an environmental point of view and also from a social point of view, is problematic.

Change must not be too drastic

This brings me to the conclusion: I want to stress three main things. First of all, concerning the travel competencies, I'd like to stress that in areas or in regions where important transportation changes are on their way, people have really to be taught and to learn how to make use of the new system. Changes should never be too drastic, too abrupt; people have to get introduced smoothly into the new system, otherwise they won't be able to make use of it.

For captive riders, public transport is a prerequisite to participate in social life

The second thing I'd like to stress, remembering the changes in trip frequencies and distances, that transport is one central – maybe not the most important, but one central – prerequisite for people to participate in societal life. So without moving, people can't recreate, work, study, etc. That means that public transport is very important, especially for the so-called captive riders, for the people who don't have any possibility to move with other modes than by bus or by metro.

Cars are still essential to social status

And third, last but not least, also linked to the second one, there's still the fact that many people now prefer to go by private car instead of going by bus, even though the objective of Transantiago was also to attract previous car users as new public transport users. Of course it can't be going out to provide everyone with a car in order to resolve transport conditions for everyone. It's a potential that people depend on public transport, so the dependence can also be analysed in a good way, to say that people have to use public transport, so it's a potential to implement a more sustainable transport system in a city. But in that sense it's not enough to provide only more or a better working public transport system, we also have to think about the car and attitudes to it. So on the one hand, of course, cars can become less attractive by restrictions and by becoming more expensive, but we also have to think about the reputation of the car. In Santiago, and I think elsewhere, the car continues to be an important symbol of status, of independence, privacy, comfortable travelling, the maximum of mobility. And as long as people aren't made aware of the problems of frequent car use, such as congestion, pollution, space consumption, etc, they will never be willing to shift towards alternative modes such as public transport.

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

Motility

En savoir plus x

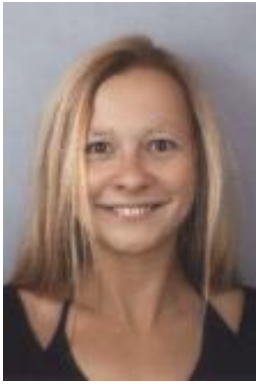
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- Alternative mobilities
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Policies

- Public transport
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To cite this publication :

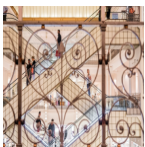
Regina Witter (15 April 2014), « Santiago de Chile and its brand-new Bus Rapid Transit system », Préparer la transition mobilière. Consulté le 19 January 2025, URL: <https://forumviesmobiles.org/en/videos/2287/santiago-de-chile-and-its-brand-new-bus-rapid-transit-system>

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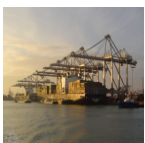
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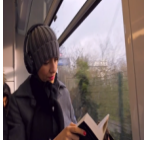
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