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Urban Cable—A Policy Option

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Abstract: In the past decade, a new generation of urban cable transport systems has emerged in many countries, most prominently in Latin America, but also in Mediterranean countries like Algeria and Turkey. Apart from being energy efficient and highly effective in bridging obstacles of all sorts, aerial ropeways also provide new access to the city for a variety of population groups. This paper displays recent cases of ropeways and gives an insight into the role that this mode can play as a part of sustainable transport systems. Some socio-political aspects are analyzed which make urban cable a politically and economically attractive policy option and conclusions are drawn from existing ropeway operations.

Key words: Urban cable transport, sustainable transport systems, transport policy, La Paz, El Alto.

1. A New Generation of Urban Cable Projects

With the installation of Linea K in Medellín (Colombia) in 2004, an aerial cable installation connecting Comuna Popular, an informal neighborhood, to the Metro line, a new generation of urban cable applications was born. Part of a struggle to re-establish peace in the crime-ridden city, part of a program of civic education, public transport was a strategic tool, acknowledging that lack of mobility is a cause of deprivation and exclusion. Although social problems cannot be solved just by transport provision alone,[1] improved access is certainly an essential condition for change. The line has been a huge success, both for the community and for the operators of the Metro, who had been suffering from poor usage. At the top station of the line, an impressive cultural building, the Biblioteca España was inaugurated in 2007 and another line (Linea L) was established in 2010 which goes on from this point to a large natural park. At other points of the city, cable lines and escalators have also been introduced and more such projects are currently under way.

In Caracas (Venezuela), a similar initiative was started, which led to the installation of the spectacular San Agustín ropeway in 2010, equally serving informal neighborhoods and linking them to the Metro line. Here, station buildings were designed as community centers, with sports and other social facilities, which would have never been possible to install without the cable project. Another line and a rope-propelled people-mover were later installed in Caracas in the same logic. Inspired by the cable projects in Colombia and Venezuela, President Morales of Bolivia ordered a system of three lines for the twin cities of La Paz and El Alto, which went into operation in 2014. In the meantime, in Rio de Janeiro, two spectacular ropeways had started serving informal areas, Morro da Providência and Complexo do Alemão. All of the systems referred to in this overview serve genuine public transport purposes and they are part of typically Latin American social policies—albeit of varying character, as the following chapters will show. Also part of the new generation of urban ropeways are the new cable lines built in many cities of Algeria, most lately the Oued Koriche—Bouzaréah line in Algiers, inaugurated in 2014. Turkey has also adopted the idea of urban

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[1] "….although mobility is a generalised characteristic and requirement of contemporary society, how mobility options operate and are inserted into economic and social routines, the positive outcomes it produces and so on, depends on the specific conditions of any given community or social group" [1].

cable—with two connected lines running in Ankara and with many more projects in the air. In Europe, cable lines have been implemented in Porto (Portugal), in Koblenz (Germany) and in London (UK). These installations, however, have a considerable tourist component in their layout and operation schedule, but they do serve public transport functions as well.

2. Urban Cable Characteristics

Assessing the relevance and the role of cable transport in cities today, something has to be said about their specific properties: (1) cable transport is obviously very efficient in overcoming obstacles of all sorts, such as water bodies, differences of altitude, brownfields, natural areas, etc.; (2) cable is usually operating in a continuous mode, with cabins travelling at headways of 10 s to 50 s. This mode is very attractive to passengers and operators alike, as it does not require the observance of departure times; (3) capacity is in the medium range, comparable to conventional buses and trams, not matching BRT (bus rapid transit) or LRT (light rail transit) systems. It is therefore rather a feeder, not a trunk system; (4) cable is environmentally friendly: it usually runs on electric power which can be produced from renewable sources. Land take is minimal. Noise levels are low. What limits the application of rope technology in the urban context are its relatively rigid geometry in routing and the considerable cost of stations which makes frequent stops unfeasible. Also, especially in the context of the highly developed city, there is concern about the visual impact, about the possible intrusion into privacy when cable lines run close to residential buildings or over private plots. The cost of cable is usually in the range of a conventional tram system, with similar capacities (up to 5,000 pphpd (persons per hour and direction)), albeit with incomparable characteristics of service.

3. Urban Cable in Transport Policies

Speaking about transport policies one must be aware that a policy is not always explicit, formalized in documents and endorsed by political deliberation, as we are trained to see it. The most powerful policies are the ones embedded in the everyday practice of institutions, driven by shared perceptions of space and spatial necessities. To these shared perceptions, decision-makers usually refer, and it takes a great political impetus and high levels of reflection to develop a framework of action which goes beyond the horizon of daily pragmatics. As an example: in 1974, the City of Zurich issued a policy that obliged all municipal institutions to work towards the goal of capping individual car traffic at a certain level. This formed the basis for a consistent program of public transport investments and for planning decisions. It includes, for example, the measure that the number of parking lots (outside and inside of buildings) is not to be increased and that the overall road transport capacity in the city must not be extended. Not all transport policies are so explicit, as we all know. What also makes a huge difference is the set of values that drive policies. With sustainability generally heralded as the guiding principle, transport policy documents are often really devised as tools for growth and economic growth is widely considered to be inseparable from the growth of motorized traffic. In this logic, transport policy documents often shroud road-building programs under a rhetoric of sustainable transport. In Addis Ababa, for example, the installation of an LRT system is being used as an occasion to expand the capacity of road-space for driving. Also, the institutional aspect plays a role. While departments of urban development on state or municipal levels promote sustainable policies, reality on the ground is shaped by national transport authorities who have their own logic and budgets. Looking at the transport policies that brought about urban cable transport in various countries, one notices that neither growth nor sustainability had been the main motive. In the South American cases, social agendas were decisive.

4. Medellín

In Medellín, the narrative was that of a "historical debt" towards the indigenous and marginalized population. In the words of the mayors, this sounded: "lo más bello para los más humildes" (the most beautiful for the most humble) [1]. The installation of the cable lines, however, was based on a previous decision, namely on that of building the metro line and on the establishment of Metro de Medellín[2] as a public entity dedicated to the provision of mass transport. In fact, the cable lines were "a way of extending the benefits of the Metro to the poorest and more inaccessible areas of the city" [2]. The Medellín example is so impressive for the fact that it essentially depicts a social policy with a highly effective transport component,[3] but this does not sufficiently explain its quality. The core aspect is in the understanding that the purpose of social integration is most effectively being supported by providing public transport and not—as it is conventionally being practiced—by road building. This is an understanding which has grown in urban politics in Colombia over a long time, starting with the educative activities promoted by Anastas Mockus in his two terms as mayor of Bogotá.[4] A central element of this program, aiming at the construction of ciudadania (citizenship), was indeed public space, thus providing the precondition for public transport. Up to today, Metro de Medellín is dedicated to civic education, running a "Cultura Metro" program. Looking at how the city of Medellín functions, one notices, however, that these programs seem to address the lower strata of the population only. In the parallel world of the affluent, American-style car-based mobility thrives unhindered.

[2]Empresa de Transporte Masivo del Valle de Aburrá Ltda.

[3]"...the municipal administration recognized Metrocable as an entry point for more widespread and integrated interventions." With the time passing, this set of operations came to be known as "urbansimo social" [2].

[4]1995~1997 and 2000~2003.

5. Caracas

A more bizarre version of these dual realities can be observed in Caracas, Venezuela, where there is no transport policy to speak of, and where the urban cable lines built between 2010 and 2012 are the result of a short-lived populist impetus, part of late Hugo Chavez' grand plans to build a socialist society. The idea, originally developed by innovative architects and engineers, happened to meet the interest of the president, who made it a national project [3]. The Metro cable lines were built and are kept running despite the political turmoil and economic downturn that is haunting Venezuela today. They do serve the needs of the population, but they could do better. In the chaotic political state of Venezuela, however, no extension of the network is in sight, let alone a transport policy.

6. Rio de Janeiro

The cable lines in Rio de Janeiro were realized in a distinct policy setting in which, again, "transport policy" is just one instrument. One of the most powerful and well-funded programs has been PAC[5]—the "Growth Acceleration Program" initiated by the national government under the presidency of Ignacio Lula, essentially dedicated to revenue—creation by public infrastructure projects. Locally, this met with the so-called "pacification" of informal areas, executed by the Federal Police in preparation of the 2014 Soccer World Cup and 2016 Summer Olympic Games events. In the huge favela of Complexo do Alemão, this constellation materialized in a cable transport installation, departing from a suburban rail station and serving a series of neighborhoods over five sections—notably with massive police buildings placed beside the hilltop-stations. There is no surprise that the cable line is underutilized—as it serves the hilltops only and not the valleys, where social and economic life is

[5] Programa da Acceleracão de Crescimento (Growth Acceleration Program).

traditionally concentrated and where transport alternatives exist. Today, there is a great deal of resentment among the population towards the cable line. It is seen not as a means of transport but rather as an intrusion.

7. La Paz

Transport has been a constant headache for generations in Bolivia's capital which sits in a bizarrely shaped canyon carved out of the Altiplano, stretching over some 500 m of height difference. Following the abolition of the previously wide-spun tram network in 1950 and bad experiences with public bus transport, the city came to rely on private bus operators and individual car traffic. From 1985 onwards, when the City of El Alto became an independent municipality, new options for a mass transport link La Paz—El Alto were considered, among them trolleybuses, light rail and cable cars. It was not the least due to the opposition of bus operators that such plans never materialized. In 2011, the administration of President Evo Morales launched another initiative, part of which was the General Transport Law No. 165 establishing a list of principles, starting with "accessibility" and ending with "sustainability" and "transparency". La Paz Municipality on its side, governed by an opposition party mayor, produced a municipal law on its own, setting the basis for a municipal transport service. In terms of investment, this political competition led to the installation of three cable lines in La Paz and El Alto in 2014 and the launch of a quality public bus service in the same year, interlinking at cable stations. In this way, although no overall transport policy was defined, something like a public transport network was put in place within a short period of time.

8. Conclusions

What can be generally said about the transport policies in the Latin American cases described above is that they are or have been tools of a wider "social policy". This is a difference with regard to transport policies of the north, which usually have a far more technical character—technical in the functionalist logic that still lingers on and even technical in ecological terms. For the cable transport cases in Medellín, Caracas, Rio and La Paz "sustainability" has been little more than a discursive element,[6] but in reality, by conserving and upgrading pre-automotive spaces and modes of livelihood, by conveying dignity to the users of public transport, by shifting values, these social policies are also highly effective in ecological terms. Enrique Peñalosa, mayor of Bogotá, once put it this way:[7] "What we did for social reasons, we could have done it for reasons of sustainability as well."

References

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[3] McGuirck, J. 2014. *Radical Cities: Across Latin America in Search of a New Architecture.* London/New York: Verso.

[6] In Medellín, some funding has been generated by selling carbon emission credits within the EU ETS scheme.

[7] On the occasion of Baukulturgespräche at Forum Alpbach, Austria, August 2010.