Mi Teleférico: Public Transportation, Social Change, and the Making of Modern La Paz

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Introduction

Public transportation has come under increasing scrutiny as the world population has grown and become increasingly urbanized. In recent decades, many ambitious and innovative public transportation projects have been implemented in South American cities. These projects warrant close investigation because of the legacy of colonialism and tumultuous histories of cities in the region. Public transportation systems bridge different areas of a city together. In South America, given that former colonial cities are often segregated by space, public transportation becomes especially impactful.

In this environment, public transportation infrastructure has social agency. The social agency of infrastructure is a topic that has been discussed before. Dr. Nikhil Anand has written about the social implications of Mumbai water pipe infrastructure in his work *Pressure: The PoliTechnics of Water Supply in Mumbai*. Anand relates the physical pressure of water in the system to the social pressure and relationships that dwellers need to access water from the system. The water pipe infrastructure thus becomes an agent that drives the development of social and political connections. The inseparable relationship between space and transport gives public transportation systems the power to intensify or remedy spatial disparities of race or class.

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Public transportation projects have the potential to be agents of social change, and can be used by governments as a tool of achieving a social agenda.

In addition, infrastructure can be a political agent. The creation of infrastructure is an entirely concrete form of political action in that infrastructure instantly becomes an interactable part of the built environment of the city. An infrastructure project therefore creates a direct connection between the government and the public who use it. This effect has been studied by researchers including Dr. Nausheen Anwar, who found that infrastructure planning has been used in the past by populist leaders in Karachi to appeal to the urban population. This infrastructural populism represents the attempt of a populist leader to connect with and ultimately gain the support of specific populations. Large, high-profile infrastructure investment also represents a leader and nation striving for a modern image and international recognition.

The impact of public transportation infrastructure in the global South requires careful consideration because of the prevalence of informal transportation in this part of the world. Informal is a flexible term referring in this case to any public transportation that is not created or supported by the government, including taxis and privately owned buses and minibuses. The contributions of the informal transit sector to urban life are often overlooked by scholars and policymakers, who attribute traffic and safety issues to the sector. Informal transit operators work under unstable conditions, heavily vulnerable to outside factors like demand and competition, with no safety net to fall back on. Governmental planning and execution of public transportation infrastructure is especially impactful to this sector.

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The development of the Mi Teleférico cable car development in La Paz, Bolivia, is a convergence of these larger ideas. The Mi Teleférico transportation infrastructure is a deeply social and political project intended to create social inclusion and to elevate Bolivia as a modern and progressive nation. Its implementation has challenged the livelihoods of drivers and other persons involved in the informal transportation sector, forcing them to confront the possibility of being left behind during the transition to government-led integrated transportation.

**A Tale of Two Cities**

The urban area that includes La Paz is made up of two cities, La Paz and El Alto, each inhabited by approximately one million people. La Paz, home of the political offices of the Bolivian National government, was originally known as La Ciudad de Nuestra Señora de La Paz and founded by Spanish conquistadors as a waypoint between Buenos Aires and Lima in 1548. The city is organized according to the Spanish colonial model, with important buildings surrounding a main plaza in the center of the city. This design and the location of parishes during colonial rule were part of a process of exclusion of space that resulted in a wealthy Spanish neighborhood in the center of the town surrounded by indigenous housing.4 This segregation of space was vigorously upheld in the early 20th century through city ordinances, the majority of which focused on public transportation.5 Public transport was of particular importance because it created social mixture and literally crossed the lines between indigenous outskirts and the urban

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center, as noted by Sierra. These characteristics later made the Mi Teleférico infrastructure viable as a tool for social inclusion. This history of indigenous exclusion is still influential in the physical and social environments of La Paz.

The city of El Alto was only officially founded in 1988, while it had existed as a settlement above La Paz centered around the regional airport and train network since the early 20th century. While La Paz is located in a valley, El Alto is situated on the overlying plateau known as the altiplano. Over half a million people lived in El Alto by the time of its incorporation, and today the population of the city has outpaced La Paz, its elder by four hundred years. This rapid growth was fueled by internal migration. Factors throughout the 20th century including the 1952 Bolivian Revolution, the dictatorship of the 1970s, major droughts, and industrialization created mass movement of indigenous mining and agricultural workers to urban centers. Migrants to La Paz settled in the less expensive outskirts of El Alto, driving large growth. Neoliberal policy and disengagement on the part of La Paz and the Bolivian National Government led to minimal regulation or investment in the growing community. As a result, development of infrastructure and wealth followed a process of incremental development that consisted of a cycle of construction, investment, and rebuilding by the residents themselves. Recently-migrated families settled on empty land on the outskirts and constructed habitations, and any generated wealth was reinvested into their homes. As time passed, buildings in the original settlement, now surrounded by outer neighborhoods, became permanent and multistory, and public infrastructure began to be developed. El Alto has become a center of rapidly growing

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6 Ibid, 1141.
wealth and industry for the region. As Benjamin Kohl noted, this creates an interesting dynamic: “El Alto is simultaneously the most revolutionary city, perhaps in all of Latin America, at the same time as it’s the most neoliberal city, the most individualistic city in all of Latin America.”

Rapid economic growth is occurring among a population that is almost entirely of indigenous descent, who have been historically disadvantaged in the country.

El Alto is fundamentally related to indigeneity. It is the only city in Bolivia created by an indigenous population since the colonial period. The dominant indigenous group in El Alto is the Aymara, one of the few Latin American indigenous groups to maintain language and culture from pre-colonial times. The migration from the surrounding rural altiplano area that resulted in the city of El Alto clustered indigenous voices together. The same forces that drove relocation and economic change intensified indigenous, cultural, and political identity.

El Alto is the largest center of social and political activism in the country. Residents have used demonstrations and road blockades to protest national and municipal policy for decades. In 2003 citizens descended upon La Paz to protest private ownership of gas resources. These protests, led by indigenous and union leaders, eventually resulted in the resignation of the Bolivian president Carlos Mesa and the election of Evo Morales. Morales, the leader of the far left political party Movimiento al Socialismo (MAS), was elected because of his support for hydrocarbon nationalization. A former coca farmer, he became the nation’s first indigenous president. From the start of his administration, Morales made social justice and indigenous rights a primary concern. Morales used commodity export profits to redistribute land and build schools,

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10 Ibid.
health facilities, and infrastructure aimed at addressing social injustices in El Alto, La Paz, and the rest of the county. Morales also expanded the national government, opening up new governmental positions that he filled with MAS members and union leaders. Using legal loopholes, Morales manipulated term limit laws, an act that, along with a retreat from many progressive stances, resulted in a loss of popularity among indigenous populations and eventually his resignation in 2019. However, the political climate created under Morales’s administration created opportunities for increased activism among indigenous and progressive populations.

Indigenous residents of El Alto have more confidently seized their rights to the city and used public space in the city center of La Paz since the successful gas protests in 2003 and the election of Evo Morales. Transformations can be seen in El Alto. Wealthy residents have begun building cholets (a combination of the word chalet and the word cholo - slang for a person of indigenous ancestry), artistic multistory buildings with commerce space on the lower floors and residences on the upper floors. Their design flaunts indigenous wealth to the surrounding areas and challenges the traditional idea of Hispanic villas. Politics in El Alto have evolved with the fall and resignation of Evo Morales in 2019, but the city has continued to expand as an economic and political powerhouse.

The rapid growth of El Alto took place with little planning and infrastructural support from nearby La Paz and the Bolivian National Government, which has left its mark on the physical layout of the city. Without overarching support or design, the city lacks sufficient public infrastructure. A particular problem is the streets, which are cramped, crumbling, and lack

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pedestrian infrastructure everywhere except the city center. Transportation in El Alto is important because it facilitates economic activity through street vendors and markets, but it is also integral for commuting to work in La Paz. Most residents of El Alto work in La Paz, mainly in domestic service. The two cities only have one direct road connection, a chaotic winding highway, which traverses the mountainous terrain with steep declines in elevation.

Citizens in El Alto and La Paz overwhelmingly rely on public transportation, and this was the case even before the construction of Mi Teleférico in 2014. In 2012 the City of La Paz reported that seventy one percent of the city population relied on public transportation.\textsuperscript{14} Statistics are harder to find for El Alto, but given that poverty numbers are higher and most workers face longer commute distances, the numbers are most likely at least similar, if not a greater proportion of the population relying on transit. Until 2014, however, neither city had any government-run public transportation. Public transportation at the time consisted entirely of a fleet of privately-owned vehicles including minibuses, trufís, and taxis which serviced the population in the area and facilitated transportation between the two cities. The differences between these vehicles are subtle. Both minibuses and trufís (shared taxis) run specific routes, while taxis do not, and trufís are generally quicker but hold fewer people than minibuses. Most of these vehicles are owned by entrepreneurs who employ drivers, and it isn’t uncommon for the same person or company to own several vehicles. Working as a driver was accessible for many migrants because it required little specialized knowledge, and so the industry is dominated by rural migrants, who are overwhelmingly of indigenous descent.\textsuperscript{15}

Both owners and drivers make up a handful of unions in what is one of the most influential unionized sectors in the city. These unions include Confederación Nacional de

\textsuperscript{15} Sierra, 1137
Choferes de Bolivia (CNCB) and Asociación Transporte Libre (ATL). As Evo Morales took power and opened up government positions for union leaders, he resisted appointing transportation union members because he preferred technically-skilled individuals for transportation positions. He also made moves towards regulating the industry and adding taxes, causing conflict with union leaders who preferred complete control. In response, transport unions took to running union members in parliament elections, which resulted in eight transport members in the 2015-2019 parliamentary period. This is up from zero members in the 1993-1997 period, which is a significant increase. Transport unions affected national legislation during this increase in representation. The 2011 Ley General de Transporte (General Transport Law), drafted by a parliament member who was a member of CNCB, passed with heavy CNCB influence, and lacked many provisions that led to criticism from the ATL transport union and other voices. The main area of dispute between the unions was over the omission of a statement declaring that every citizen has a right to equal public transportation. All unions successfully resisted government attempts to classify transportation as a state public sector because, if reclassified, national laws that restricted strikes in essential sectors would apply. The transport unions, for whom striking and blockades were the primary means of political power, understandably wished for transportation to continue as part of the private and unregulated sector. During his time in office, Evo Morales walked a fine line between executing his agenda and appeasing the transport unions, a major source of support during his rise to power and who still wielded considerable political influence. Relations between the unions and the government worsened due to government interference in the transportation sector. The added construction of Mi Teleférico, which dissolved the transportation monopoly, led to increased engagement in institutional

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government. Such involvement was supported by the Morales government because it gave formal representation to union voices.

A combination of poor infrastructure, no regulation, and intense competition in the informal transportation system created a chaotic transportation system. Population growth in La Paz and El Alto also contributed to congestion on roadways. Growth in La Paz and El Alto from 1977 - 1997 corresponded with an increase in daily public and private trips. From 1997 - 2012, daily trips increased with a greater magnitude than the population increase, with an increase of around one and a third million trips to a population increase of one to two hundred thousand people. This drastic increase surely affected the condition of roads and other transportation infrastructure. Accessibility, especially for disadvantaged populations, was another reason for the development of Mi Teleférico.

**Mi Teleférico**

The first three lines of the Mi Teleférico cable car system were installed in 2014, with additions including phase two of the project in 2018 bringing the total to ten lines with twenty six stations. The project has cost over 700 million dollars, funded entirely internally. The funds for the original construction came from hydrocarbon revenues (including gas) and the system has proven to be financially sustainable by offsetting day-to-day running costs with fares.
The project was implemented by the national government with little input from the municipal level, even though it is entirely within the cities of La Paz and El Alto. Evo Morales had direct influence in the development of the project. The construction of the system was handled by the Austrian company Doppelmayr, which also provided technical training to Bolivian employees from the state-owned Mi Teleférico company to allow the network to be maintained.

Mi Teleférico provides a direct connection between El Alto and La Paz. This connection is crucial for El Alto, given that before the implementation of the system most residents commuted by minibus to work in La Paz. For those who live in La Paz, the transit system provides quicker access to the airport and the large market Feria 16 de Julio. A study including both La Paz and El Alto residents by the Inter-American Development Bank in 2017 estimated that the first three Mi Teleférico lines resulted in 22% travel time savings. A study in 2018 by the same organization calculated an average reduction of travel time by 70 minutes, with El Alto residents reducing daily travel time by ninety-five minutes. The authors caution that based on the data these figures may not be entirely accurate, but they point out in their conclusions there is clear evidence that Mi Teleférico has had a greater travel time impact on El Alto residents than La Paz residents.

Mi Teleférico released a report that contains statistical data from implementation in 2014 to 2021. Over this period, Mi Teleférico has transported 369,100,622 people, and ridership has increased from the prior year in every year except the COVID-19 pandemic shutdown year of 2020. Fifty percent of users in 2021 fell into the lowest income bracket, less than 2,800 bolivianos. The report also details money saved for persons with disabilities, elderly, and students through fare discounts. In 2021, twenty nine percent of riders were primary students, one of the highest proportions of ridership by occupation. The project has had significant environmental effects, as well. The report claims Mi Teleférico, which runs on electricity, has reduced gasoline consumption by 46.2 million liters of gasoline, and reduced emissions by 106.3 thousands of tons of CO₂.

Along with the physical cable car system, Mi Teleférico instituted social programs. The department installed green space around many of the cable car stations for sports, concerts, and cultural events. The largest such area is La Parque de la Cultura y la Madre Tierra, a large 53,500 square meter (13.2 acre) park built on the site of an old railway station next to the central Mi Teleférico station. These parks have contributed to the city’s biodiversity; 30.59% of species in the urban area are estimated to have been planted as a result of Mi Teleférico. Mi Teleférico is a massive and diverse project that has not been limited to just transportation.

Published public opinions of the system are favorable. According to Mi Teleférico, 94% percent of users are satisfied with the service and consider it accessible. Interviews in news stories praise the system, with one interviewee saying that the system is fast and reliable which is

especially important during road blockades and protests. It has also become the most popular tourist attraction for the city and a recognizable icon for the rest of the world. Images and videos of the cable car network are easily accessible on social media, giving larger exposure to La Paz and El Alto.

It is hard to find published criticism of the system. Samuel Medina, a political opponent of Evo Morales in 2019, pointed at the cost of over $700 million as a major expense for Bolivia. The cost has been higher than other cable car projects in other cities, which the developer has attributed to the specific circumstances of the project including the local terrain. Another criticism has to do with the implementation of the project. When Mi Teleférico was first opened by the National Government in 2014, the Municipal Government of La Paz started a bus program called PumaKatari to address the public transportation situation in the city. These projects were developed and implemented without consultation, and as a result PumaKatari bus lines often did not connect with Mi Teleférico stations, and the transfer between these two systems created excessive fare costs. The city has taken measures to better integrate transportation but according to critics this could have been achieved at no cost with better planning.

The Mi Teleférico cable car system is part of a wider story of the Morales government’s juggling act between achieving their goals and appeasing the grassroots indigenous and labor union base that elevated it to power. Evo Morales rose to power in the aftermath of the gas war, the conflict sparked by protests against private ownership of the country’s hydrocarbon

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30 Grace, 2019.
31 Ibid.
resources. Morales set a tax on hydrocarbons in 2005 and naturalized the gas industry in 2006.\textsuperscript{32} These actions served as the culmination of the movement that began in 2003 and for Morales a deliverance of a key promise. Over the first few years Morales' government pursued many actions toward promoting indigenous rights and dismantling the racial power structure that existed in the country. The Morales administration distributed 134 million acres of state or private land to indigenous trusts, created social safety net programs targeting children and the elderly, and opened up government positions for indigenous and union leaders.\textsuperscript{33} These actions faced early backlash from wealthy whites and mestizos. Conspicuous resistance gradually fell as indigenous citizens continued to exercise agency through counter-protests and occupying public space. At some points the government stepped in. The government passed an anti-discrimination law targeting hotels and restaurants in mestizo and white areas who had begun to put up signs saying they had the right to restrict access.\textsuperscript{34} Over time, however, Morales lost support among progressive indigenous leaders. The government was criticized for rolling back key promises: cutting environmental regulations, building expensive projects, and compromising with industry and elites. The land distribution program slowed years after its implementation, and Morales began to forge alliances with large agro-business to expand agriculture in the country.\textsuperscript{35} Other controversies including a plan to build a highway through an indigenous reserve were met with protests from the very community that elevated Morales to power.\textsuperscript{36}


The Mi Teleférico project represents an example of the Morales government introducing policy to achieve administration goals, but in the process, alienating part of its traditional base of support. The system primarily and directly impacts indigenous residents in El Alto. This project is a form of infrastructural populism; the building of transportation infrastructure has led to praise and support towards Morales and the government. Mi Teleférico had a secondary effect, however, on the informal transportation sector. It must be pointed out that construction of the cable car system intended to improve the lives of indigenous people alienated the unions in a heavily indigenous sector. Transport unions have seen a drop in private transit business since the construction of the Mi Teleférico system. They have responded with protests. In 2018 the news source Urgente posted a message from the general secretary of the Simón Bolívar union voicing his organization’s displeasure of the construction of new Mi Teleférico lines: “Nos están invadiendo nuestras áreas de trabajo, por tierra con los Pumas, y por aire con las nuevas líneas del Teleférico… [Our work areas are being invaded by land with PumaKatari and by air with new lines of Teleférico].” This comment was part of a memo to the director of Mi Teleférico that threatened strikes and blockades, even while members were already blocking roads in the city over acquisition of new PumaKatari buses. These attempts at exerting power conflict with a secondary consequence of Mi Teleférico. The fundamental design of cable cars nullifies the effectiveness of union road blockades, their primary means of political pressure. Cable cars circumvent the road system by carrying their passengers over it, meaning that street blockades have no effect on their ability to function. Any blockade of major roads, therefore, hurts the drivers and fleet owners themselves and actually drives commuters into using the cable cars. Comments to journalists have pointed out the lack of disruption by roadblocks as a factor in

37“Choferes dicen que se movilizarán también contra Mi Teleférico,” Urgente, January 25, 2018, https://www.urgente.bo/noticia/choferes-dicen-que-se-movilizar%C3%A1n-tambi%C3%A9n-contra-mi-telef%C3%A9rico.
choosing to use Mi Teleférico, and ridership has spiked during large blockades by transit
unions.\textsuperscript{38} The message to Mi Teleférico mentioned above specifically threatened protesting at
specific cable car stations, evidence of shifting union tactics brought about by this dilemma.

Mi Teleférico, although state-established, operates as a for-profit company. Despite
Morales’ progressive left-leaning stances, many of his projects work in partnership with the free
market. This is reflective of some of the compromises and concessions the Morales government
made to industry that caused a loss of support among some progressive allies. As a consequence
of its implementation, Mi Teleférico competes against informal public transportation providers.
Statements from Mi Teleférico declare that this competition isn’t an issue because the company
is not subsidized, with its proceeds covering operating expenses. PumaKatari, the city bus
network, on the other hand, is subsidized, with the funding not exceeding 5\% of the city budget,
a figure equivalent to around 102.2 million Bolivians.\textsuperscript{39} Transport unions have heavily protested
PumaKatari because of these subsidies. Resistance against Mi Teleférico centers around the 700
million dollars invested in the construction of Mi Teleférico, an investment which fleet owners
cannot compete with and which therefore threatens the livelihoods of them and their drivers. In
addition, restrictive regulations passed by the government, some fast-tracked as a result of health
concerns in the 2020 COVID-19 pandemic, handcuff drivers’ abilities to make profits.\textsuperscript{40} The
pandemic resulted in a decrease in transit use across all forms of transportation, and informal
transit drivers, lacking in government support, faced critical conditions that threatened their
survival. Since most of these drivers are indigenous migrants, Mi Teleférico therefore divides the
indigenous Aymara community. Many love the development because it is safer and reduces their

\textsuperscript{38} Matthew Grace, “Bolivia’s aerial transit system casts shadow on elections,” \textit{Al Jazeera}, October 18th, 2019,
\textsuperscript{39} Miriam Telma Jemio, “La Paz repiensa un transporte que cuide a la gente sin que pierdan los choferes,”
\textsuperscript{40} Ibid.
commute times to the center of La Paz, while indigenous informal transportation drivers are hostile against it because they view the network as unfair competition that threatens their livelihoods.

**Conclusions**

Evo Morales, in an interview after his ousting in 2019, said “We became the first country in economic growth in all of South America. Before, Bolivia had only ever been first in poverty and corruption.” He takes pride in his role of accelerating Bolivia’s global recognition and internal development. Morales and his government were also responsible for a radical ideological shift in how development should be achieved. “They don’t forgive me, because I nationalized the natural resources…they don’t forgive me, because I reduced extreme poverty. In the capitalist system, the idea is that if you’re poor you should look after yourself, and there won’t be any social problems. But that doesn’t work in Bolivia,” said Morales, sounding bitter. Many drivers and owners of minibuses, trufis, and taxis also have reason to be bitter. The transportation plans for the future of La Paz, following in the footsteps of the United Nations Sustainable Development Goals, center around inverting the current transportation hierarchy and prioritizing pedestrians followed by public transportation, with private automobiles at the lowest level of desirability. The modern vision of public transportation as a network of centrally-planned, government-supported infrastructure leaves out the informal transportation sector, reducing them to insignificance. The people who make up this sector, facing exclusion from the city and a subaltern existence, are taking advantage of the more open political

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environment created under Morales to fight for their place in the future. This struggle will require change, since cable cars neutralize the power of roadblocks, the transportation unions’ traditional method of asserting political agency. Studying Mi Teleférico provides insight on the social and political power of public transportation, whether intended or unintended by the government, and the complexity of socially-conscious sustainable development.


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