Chaotic and monstrous reincarnation of the Ciudad de los Palacios, Mexico's capital is often perceived as an unfortunate but natural outcome of demographic explosion, legendary corruption, and technocratic mismanagement. A closer examination of the matter, however, reveals that a great deal of artificial congestion, a desired urban crisis. This experiment, which was made possible by an authoritarian centralization of power and has enormously benefited a very few, is notable not only for its scale, but also for a creative use of infrastructure as a powerful urban mutagen—with the most vivid example being the Mexico City metro system.

Infrastructure exists in a reciprocal relation with its milieu, each being in part the cause, and the effect of the other. In the case of Mexico City's metro, however, this balance is deliberately shifted toward a top-down control of the environment, with infrastructure having become an exceedingly powerful tool for reshaping the city. This form of control is not a rigid system—rather, it is a system of controlled disorder that has ignited the fruitful crisis being witnessed today.

A Radical Launch of the Metro

As a result, in the mid 1960s President Díaz Ordaz (1964–1970) pursued the development of Mexico City's modern subway network with conviction. The project was instigated as a solution to the public not only as an antidote for congestion and a salvation for commuting workers, but also as a crucial part of Mexico's "modernized" image to present to the world at the 1968 Summer Olympics. All of these potential benefits (none of which actually worked out) were still insufficient to outweigh the great engineering complications that would be faced by the project.

The turning point that inspired Díaz Ordaz and his allies was twofold, and rooted in Mexico City's real estate market. The first and most obvious reason was the hope that subways would trigger downtown gentrification and boost land values, which would turn the city's core into an investment paradise for developers. Ideally, the expansion of a technically proficient metro would trigger downtown gentrification and boost land values, which would turn the city's core into an investment paradise for developers. Ideally, the expansion of a technically proficient metro system would transform Mexico City into an investment paradise for developers.

Yet, a proposal to build an underground network within a water-saturated subsoil of lakebeds located in an earthquake hazard zone underneath a city that sinks at a rate of 60mm a year did not seem particularly sane. But with new technological advancements, and the increasing technocratic presence within the party, the real possibility of a metro began to take hold.

As a result, in the mid 1960s President Díaz Ordaz (1964–1970) pursued the development of Mexico City's modern subway network with conviction. The project was instigated as a solution to the public not only as an antidote for congestion and a salvation for commuting workers, but also as a crucial part of Mexico's "modernized" image to present to the world at the 1968 Summer Olympics. All of these potential benefits (none of which actually worked out) were still insufficient to outweigh the great engineering complications that would be faced by the project.

The turning point that inspired Díaz Ordaz and his allies was twofold, and rooted in Mexico City's real estate market. The first and most obvious reason was the hope that subways would trigger downtown gentrification and boost land values, which would turn the city's core into an investment paradise for developers. Ideally, the expansion of a technically proficient metro would transform Mexico City into an investment paradise for developers.

Yet, a proposal to build an underground network within a water-saturated subsoil of lakebeds located in an earthquake hazard zone underneath a city that sinks at a rate of 60mm a year did not seem particularly sane. But with new technological advancements, and the increasing technocratic presence within the party, the real possibility of a metro began to take hold.

As a result, in the mid 1960s President Díaz Ordaz (1964–1970) pursued the development of Mexico City's modern subway network with conviction. The project was instigated as a solution to the public not only as an antidote for congestion and a salvation for commuting workers, but also as a crucial part of Mexico's "modernized" image to present to the world at the 1968 Summer Olympics. All of these potential benefits (none of which actually worked out) were still insufficient to outweigh the great engineering complications that would be faced by the project.

The turning point that inspired Díaz Ordaz and his allies was twofold, and rooted in Mexico City's real estate market. The first and most obvious reason was the hope that subways would trigger downtown gentrification and boost land values, which would turn the city's core into an investment paradise for developers. Ideally, the expansion of a technically proficient metro would transform Mexico City into an investment paradise for developers.

Yet, a proposal to build an underground network within a water-saturated subsoil of lakebeds located in an earthquake hazard zone underneath a city that sinks at a rate of 60mm a year did not seem particularly sane. But with new technological advancements, and the increasing technocratic presence within the party, the real possibility of a metro began to take hold.

As a result, in the mid 1960s President Díaz Ordaz (1964–1970) pursued the development of Mexico City's modern subway network with conviction. The project was instigated as a solution to the public not only as an antidote for congestion and a salvation for commuting workers, but also as a crucial part of Mexico's "modernized" image to present to the world at the 1968 Summer Olympics. All of these potential benefits (none of which actually worked out) were still insufficient to outweigh the great engineering complications that would be faced by the project.

The turning point that inspired Díaz Ordaz and his allies was twofold, and rooted in Mexico City's real estate market. The first and most obvious reason was the hope that subways would trigger downtown gentrification and boost land values, which would turn the city's core into an investment paradise for developers. Ideally, the expansion of a technically proficient metro would transform Mexico City into an investment paradise for developers.

Yet, a proposal to build an underground network within a water-saturated subsoil of lakebeds located in an earthquake hazard zone underneath a city that sinks at a rate of 60mm a year did not seem particularly sane. But with new technological advancements, and the increasing technocratic presence within the party, the real possibility of a metro began to take hold.

As a result, in the mid 1960s President Díaz Ordaz (1964–1970) pursued the development of Mexico City's modern subway network with conviction. The project was instigated as a solution to the public not only as an antidote for congestion and a salvation for commuting workers, but also as a crucial part of Mexico's "modernized" image to present to the world at the 1968 Summer Olympics. All of these potential benefits (none of which actually worked out) were still insufficient to outweigh the great engineering complications that would be faced by the project.

The turning point that inspired Díaz Ordaz and his allies was twofold, and rooted in Mexico City's real estate market. The first and most obvious reason was the hope that subways would trigger downtown gentrification and boost land values, which would turn the city's core into an investment paradise for developers. Ideally, the expansion of a technically proficient metro would transform Mexico City into an investment paradise for developers.

Yet, a proposal to build an underground network within a water-saturated subsoil of lakebeds located in an earthquake hazard zone underneath a city that sinks at a rate of 60mm a year did not seem particularly sane. But with new technological advancements, and the increasing technocratic presence within the party, the real possibility of a metro began to take hold.

As a result, in the mid 1960s President Díaz Ordaz (1964–1970) pursued the development of Mexico City's modern subway network with conviction. The project was instigated as a solution to the public not only as an antidote for congestion and a salvation for commuting workers, but also as a crucial part of Mexico's "modernized" image to present to the world at the 1968 Summer Olympics. All of these potential benefits (none of which actually worked out) were still insufficient to outweigh the great engineering complications that would be faced by the project.

The turning point that inspired Díaz Ordaz and his allies was twofold, and rooted in Mexico City's real estate market. The first and most obvious reason was the hope that subways would trigger downtown gentrification and boost land values, which would turn the city's core into an investment paradise for developers. Ideally, the expansion of a technically proficient metro would transform Mexico City into an investment paradise for developers.

Yet, a proposal to build an underground network within a water-saturated subsoil of lakebeds located in an earthquake hazard zone underneath a city that sinks at a rate of 60mm a year did not seem particularly sane. But with new technological advancements, and the increasing technocratic presence within the party, the real possibility of a metro began to take hold.

As a result, in the mid 1960s President Díaz Ordaz (1964–1970) pursued the development of Mexico City's modern subway network with conviction. The project was instigated as a solution to the public not only as an antidote for congestion and a salvation for commuting workers, but also as a crucial part of Mexico's "modernized" image to present to the world at the 1968 Summer Olympics. All of these potential benefits (none of which actually worked out) were still insufficient to outweigh the great engineering complications that would be faced by the project.

The turning point that inspired Díaz Ordaz and his allies was twofold, and rooted in Mexico City's real estate market. The first and most obvious reason was the hope that subways would trigger downtown gentrification and boost land values, which would turn the city's core into an investment paradise for developers. Ideally, the expansion of a technically proficient metro would transform Mexico City into an investment paradise for developers.

Yet, a proposal to build an underground network within a water-saturated subsoil of lakebeds located in an earthquake hazard zone underneath a city that sinks at a rate of 60mm a year did not seem particularly sane. But with new technological advancements, and the increasing technocratic presence within the party, the real possibility of a metro began to take hold.
infrastructural apparatus would accelerate growth and cause the city's population to reach 10.8 million, again opening a whole new set of opportunities for banking and real estate forces.6

Not surprisingly, such a risky urban initiative found as many opponents as supporters. The pressure of uncontrolled expansion on development continued to spread slum housing, and the astronomical costs of the project (almost 1.5 billion pesos in foreign lending, plus 900 million pesos from the Distrito Federal, or DF) could not be ignored. As an agent of expansion, the metro also scared Erasto Uruchurtu, the city's mayor (1952–1966), since the sprawl outside Mexico City's DF borders would mean that part of the fiscal gains would go to the adjacent state of Mexico, and given that in the 1960s industrialists were starting to move outside the DF's limits, any further expansion foreshadowed considerable financial losses.7

Despite these warnings President Díaz Ordaz could not forgo the benefits the metro would provide, both for his allies and for himself personally. His decision was driven by ICA, a powerful Engineering and Construction firm that won the competition for the metro's construction and whose numerous affiliations, such as Banco del Atlántico, made enormous profits through real estate manipulation.8 It is obvious that those involved in condominium construction as well as residential and industrial development across Mexico City, urban expansion was a best-case scenario, capable of drastically amplifying their profits. Díaz Ordaz himself had strong ties to the ICA by virtue of being married to a daughter of Borja de Navarette, one of the firm's founders.9 Provided with the powerful backing of his allies, Diaz Ordaz declared a media war on Uruchurtu and the metro's opponents, which culminated in a widespread bus strike that paralyzed Mexico City's core, thus demonstrating the necessity of an alternative mode of transportation.10

As a result, in 1967, ICA began the construction of the first Mexico City metro line. This infrastructural apparatus was launched two years later, in 1969, and then rapidly and increasingly extended until 1972, when it reached a length of 42.4 km.11 The layout intensified circulation in the downtown by encircling the historic core and stretching towards peripheral areas in all four directions. The subway's spatial arrangement was very much in tune with the PRI's fixation on centralization and the concentration of resources, and population in a single area. Despite the initial claims that the subway would help encourage decentralization, the first three lines were planned as converging towards a single circuit, enclosing what was thought to become in the future a cluster of large enterprises, enjoying centralized access to surrounding localities. Thus, the initial stage of Mexico City's metro can be viewed as a spatial imprint of an authoritarian mentality imposed on an urban space. The system worked, but not exactly as expected by Díaz Ordaz, and definitely not as anticipated by the general public. The great controversy that accompanied the metro’s inception did not allow President Díaz Ordaz to finish the construction in time for the 1968 Olympics. The plan to present the world with an image of a modern, technologically advanced metropolis was ruined—not only by a delay in the metro’s construction, but also by a number of public protests that culminated in a massacre of students in the Tlatelolco area of the city, around Magdalena Mixhuca Sports City, Arena Mexico and Auditorio Nacional to name a few.12

Any policy that consciously pushes a city towards a self-destructive developmental path may seem like political suicide regardless of the financial gains, but not in the case of PRI. By encouraging hyper-speed industrialization since the 1940s, the party managed to achieve rapid economic growth after a decade of deep crisis.13 Consequently, in the 1960s and early 1970s, the PRI enjoyed incredible public support, and their largest electoral support.14 At the time, the question of perceived legitimacy was not the party’s main concern, so such a radical intervention into the urban milieu as the metro was both socially affordable and financially beneficial. In any case, the successful launch of the infrastructural apparatus introduced a whole new level of technocratic intervention into Mexico City's development, which was further explored and modified in the decades to follow.

Symbiotic Recalibration

Even heavily centralized states can ignore public opinion regarding the radical transformations of the city only for so long. The scale of urban change caused by the discrepancy between the promised and actual benefits for commuters caused widespread discontent among the general public. In a populist effort to relieve the tensions, Díaz Ordaz’s successor, Luis Echeverría (1970–1976), decided to declare a moratorium on any further extensions of the network. When it became apparent that, once triggered, urban growth could not be stopped, but only slowed down. At the same time, the inefficient bus system and the overcrowded metro promised an impending transportation crisis. To solve this issue, Echeverría decided to follow in the steps of his predecessor and ally himself with pro-growth forces, such as the banking and financial sector, and real estate developers. As a result, in 1972 Mexico City Mayor Gomez Sentries announced the government’s plans to double the already existing network, which in turn led to massive anti-metro protests that were quelled by a military intervention in the 1980s, 1990s, and 2000s.15

This time, however, the radical, highly centralized model was revised. It became clear that in order to sustain its already damaged legitimacy, the PRI would have to restrain itself from policies that affected the population in a highly negative way, even if this entailed financial losses for the party’s allies. This situation triggered a shift in the technocratic logic away from a strict, infrastructural dictatorship, and part of the change comes from processes then occurring in numerous urban areas around the world. After the 1970s, Mexico City could not avoid the fate of many other metropolitan regions, and experienced a shift towards a post-Fordist, postindustrial system of production, and the rising prominence of tertiary activities.16 This change resulted in an overall recalibration of the technocratic dogma away from the modernist preoccupation with resistant and centralized systems, and towards flexible, more resilient, and modular assemblages.17

In Mexico’s politics, this new approach manifested itself in a (hypocritical) decentralization of power that started with President Miguel de la Madrid (1982–88), who attempted to decrease the role of the state and provide more opportunities for opposition parties to compete within a more open system. However, the growing success of the opposition parties in local elections soon forced de la Madrid to return to more traditional strategies. His successor, Carlos Salinas de Gortari (1988–94), managed to take the illusion of democratization to a whole new level. As William Beezley argues, even though widespread privatization, secularization reforms, and the dissolution of the eje...
Inception and evolution of the Mexico City Metro

1940
- Urbanization-led industrial development
- Manuel Ávila Camacho (1940–46)
- Miguel Alemán (1946–52)

1950
- Stabilizing Development
- Adolfo Ruiz Cortines (1952–58)
- Adolfo López Mateos (1958–64)

1960
- Massive Rural Migration to Mexico City
- Relocation of industry outside of DF's boundaries
- Bustamante Metinur (1964–70)
- Luis Echeverria (1970–76)

1970
- Launch of the Metro
- Mayor Sintes announces government's plans to double the existing network
- 1968 Summer Olympics
- Tiadeteño massacre

1980
- Construction Starts
- Miguel de la Madrid (1982–88)
- Carlos Salinas de Gortari (1988–94)

1990
- NAFTA
- Over two years Mexico invests $1.796 Billion in development of Telecommunication Technologies
- NAFT

2000
- Vicente Fox (2000–06)
- Felipe Calderón (2006–12)

2010
- Completion of Line 12
- Enrique Peña Nieto (2012–)
system of agriculture helped to decrease the state’s influence on the economy, Carlos Salinas also did a great job in strengthening the presidency and keeping opposition parties under control: postmodern political resilience in action.\(^{20}\)

Carlos Salinas’s neoliberal adoption of NAFTA had a direct impact on Mexico City, particularly on its growth pattern, which in turn influenced the metro’s development at the time. Just as Diane E. Davis predicted in her 1994 book *Urban Leviathan: Mexico City in the Twentieth Century*, the free trade agreement helped to shift attention away from the metropolis and redirect part of the migrant population towards northern border states. Indeed, in 1980 Mexico City employed 44.4 percent of manufacturing workers, and the border states employed only 21 percent, by 2003 the situation nearly reversed, to 21 percent.

\(^{21}\) The city’s growth did slow down during this period, but did not stop completely, in part because of job losses in the agricultural sector (due to imports) and the *maquiladoras* (due to the relocation of assembly plants to countries paying lower wages in Asia); this resulted in a new wave of migration to metropolitan areas, with DF being a popular destination.\(^{22}\)

The city changed not only in terms of its size, but also structurally. Set free by NAFTA, vast inflows of transnational capital began to reshape Mexico City’s urban fabric according to the necessities of large-scale businesses and commercial enterprises. Such giants as Hewlett-Packard, Mercedes-Benz, Chubb Insurance, and Televísa established headquarters in the Santa Fe area of the city, where 650 hectares of land had been dedicated to new businesses, shopping malls, and opulent residential developments. Paseo de la Reforma and fragments of Polanco, Insurgentes, and Periférico Sur underwent a radical transition from notorious low-income neighbourhoods to upscale residential and commercial areas built in accord with “first-world” standards. These new developments featured transnational hotel chains and large-scale shopping centres, which introduced satellite telecommunications, cable television, and multiplex cinemas to the neighbourhoods that just a decade previous would be considered the ultimate urban disaster.\(^{23}\)

Changes in both Mexican politics and the capital’s demographic situation influenced the subway’s structure. During the 1980s and 1990s, the metro witnessed a vast expansion of its network, while in terms of being a top-down urban mutagen the subway was switched to “standby” mode. This constituted a temporary shift from infrastructural dictatorship towards a more neutral bottom-up logic dictating the system’s development. During this period, the geometry of the network also followed the path of decentralization, the new paradigm both professed by the government and evident in increasingly multinodal urban forms around the world. While in the late 1960s and early 1970s, the metro was supposed to connect the core to the periphery by means of radial and diametrical lines, over the next two decades new tangential lines started to appear.\(^{24}\) The extensions of the subway system during this period were adapted to urban changes rather than deliberately driving them as before. The new lines were aimed at intensifying circulation in the first ring of the expanding metropolis, which experienced accelerating migration up to the 1990s, despite an overall slowdown in population growth during this period.

The fact that the government temporarily restrained itself from using the radical reformatory force of the subway did not mean that it was ready to completely abandon this valuable utility. It became evident that in the given circumstances, redeployment of the subway as an aggressive growth agent was neither safe nor affordable, especially when there were easier means of gaining profit. It was the case that even though the initial employment of the apparatus greatly aided banking and real estate players, it did a poor job triggering gentrification in the core, failing to spark high-density development in the area. When a new wave of growth was inconvenient and socially dangerous, it was time to pursue an alternative opportunity. The power source for this new urban transformation was also found in the realm of infrastructure; however, this time the honour of technocratic intervention belonged to the field of telecommunications. In 1986 and 1987, Mexico invested $850.7 million and $945.9 million, respectively, in the development of this technology, the lion’s share of which went to the improvement of Mexico City’s telephone infrastructure, which was seriously damaged by the 1985 earthquake.\(^{25}\) These infrastructural improvements, in combination with metro expansion, boosted tertiary activities in the populous first ring, which by the year 1990 housed 1,844,491 workers employed in service-sector activities.\(^{26}\)

All of the aforementioned processes contributed to the rise of Grupo Carso, its sister conglomerate Carso Global Telecom, and, in particular, the latter’s daughter company TELMEX (Telefonos de Mexico). The Grupo Carso itself is a transnational multinodal entity owned by billionaire Carlos Slim, with investments in three continents. The Slim family, in turn, has large investments in real estate and other companies (including Reynolds Alumni, Sanborns, Sears, Grupo...
However, building up necessarily requires an increase in transportation network’s capacity on the ground. Since in the case of Mexico City the employment of Intelligent Transportation Systems technology is impossible due to the lack of sufficient processing facilities and serious telecommunication issues, the problem is being solved by a “Supply Fix” transportation strategy, the implementation of which is evident from the direction and scale of foreign and local investment flows. For instance, since 2008, three lines of the Tren Suburbano—an extensive suburban railroad—were launched in order to connect the central city to the populous northern territories and outmost southeastern areas.34 In October 2012, ICA completed Line 12, the longest line in the metro system, estimated to carry 367,000 passengers a day.35 Also, in 2013 President Peña Nieto launched a new program whose aim is to attract foreign investment to the development of Mexico’s infrastructure, particularly the expansion of the suburban railroad network in Mexico City.36 And finally, the ICA has revealed its plans to double the metro’s length by the year 2020 by constructing five more lines, which would give the network a total length of 483 kilometres.37 Thus, in a curious way, the metro evolved from a means to an end (as a driver of urban growth that created favourable conditions for real estate development) to an end in itself (as a final destination for investment inflows). By driving Mexico City to a point of no return, the subway effectively created a demand for itself, as well as for other rescue measures that promise high profits for investors. For how long this situation can remain under relative control is unclear, especially given the recent acceleration of Mexico City’s population growth, following more modest growth rates.38 Relative control is being solved by a “Supply Fix” transportation strategy, the implementation of which is evident from the direction and scale of foreign and local investment flows.

Notes
3. Ibid., 151.
5. Davis, Urban Levanith, 151.
9. Ibid.
10. According to Diane Davis, the first big strikes of the mid-1950s were organized by independent union leaders, which meant that the inception of the protest cannot be fully attributed to the government of Diaz Ordaz. However, Davis and Bezzey both agree that the strikers were later encouraged by being allowed to last for a long time. Davis, Urban Levanith, 163, and Bezzey, The Oxford History of Mexico, chap. 19.
17. Ibid., 330.
18. Ibid., 222–227.
This project examines the political economic conditions of Mexico City over the last two decades—the years of the North American Free Trade Agreement (NAFTA)—as a frame for understanding the infrastructural developments of the city. The chart traces political events (both federal and municipal), spatialized demographic growth (geo-statistical basic area), the nation’s economic growth (GDP), and the history of the emerging private social housing monopoly. Contrary to expectations, the city has lost density, resulting in a more disconnected and under-equipped city. This can be primarily explained by the deregulation of the private social housing sector witnessed over the past decade.