The Downfall of New York City's Subways

Thomas Zhao (tz272) Final Research Paper

Professor Nicholas Klein Cornell University, CRP 3860

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Introduction

The New York City subway system is in a serious state of disarray, leading to the ridiculous transit unreliability that the subway is notorious for. The purpose of this research paper is to explore the circumstances that led to the current, dysfunctional subway system of New York City and its impacts on the city's residents.

The subways of New York City are operated by New York City Transit (NYCT), whose parent authority is the more well-known Metropolitan Transit Authority (MTA). While this research paper will predominantly explore the shortcomings of the MTA's subway system in New York City, the subway nonetheless holds some remarkable feats and qualities. For one thing, it operates twenty-four hours a day, seven days a week; pretty fitting for the city that never sleeps. It is also the largest subway system worldwide by number of stations, and it has the largest ridership of any public transit system in the United States ("Let's Take A Ride," 2014).

However, to the average New Yorker, these factoids do not matter nearly as much as current subway deficiencies. Reliability is likely the number one concern that New York City residents have about the subway due to ubiquitous delays. As a result, overcrowding suddenly is exacerbated to a whole new level. That is in addition to the giant rats on the train tracks scrounging for scraps of food or suitable litter for nest building. The city's subways are an embarrassment to the powerhouse that is New York City. Other subway systems worldwide are much more reliable and cleaner than New York City's (Garfield & Nudelman, 2017). The MTA's on-time performance reached as low as 36 percent for a single subway line in 2016 (Stringer, 2017b). This is universally unacceptable by all standards, especially for a subway system tasked with providing millions of New York City residents with irreplaceable transit. So

why is it that one of the financial centers of the world does not have a state-of-the-art subway system?

Brief History of the NYC Subway System

The New York City subway system has its roots in the early twentieth century. The city initially had above-ground elevated trains, known as "els" for short. These els served as an alternative to horse-drawn carriages and street-level trolleys, both of which were subjected to street traffic. The idea of having underground rail lines had been floating around, but the importance of such a transition was not considered by many during this time (Walker, 2017). Many feared that underground tunnels were unsafe. People were skeptical of the integrity of the tunnels, fearing collapse. They also believed that breathing the stagnant, underground air would cause them to contract tuberculosis (Harris, 2019).

Then the Great Blizzard of 1888 struck New York City. In a sense, the storm "propelled the cities of the East Coast into the modern age" (Spellen, 2018). It snowed continuously for a day and a half, with snowdrifts reaching as high as 52 feet tall. Homes were buried, telephone lines were snapped, and many did not survive the sudden onslaught of cold. Like the rest of the city, the els were also severely impacted. Strong winds threatened to topple the trains from the tracks and heavy snowfall prevented the trains from moving. There were few objections for an underground subway system after the blizzard (Spellen, 2018).

The first subway line was opened by the privately-owned Interborough Rapid Transit (IRT) in 1904. With enormous success, they expanded their lines across the city. Another privately-owned company, the Brooklyn Rapid Transit (BRT), which was later acquired by the Brooklyn-Manhattan Transit (BMT), constructed and operated many lines in Brooklyn. The city and these two private subway companies worked together under the Dual Contracts, which

imposed regulations upon the companies but allowed them to operate existing and new lines on the behalf of New York City. Eventually, the city created its own public subway company known as the Independent (IND) to compete with the two private companies. The IRT and the BMT went bankrupt and the city took over the unification of the city's subways in 1940 ("Subway FAQ," n.d.). The New York City Transit Authority was created to oversee all public transit in the city. The MTA was later created in 1968 as the parent authority of the New York City Transit Authority, the latter now known as New York City Transit ("110 Years of the Subway," n.d.).

Government Takeover

Since the IRT opened the first subway line in 1904, the subway was largely a success. It was invested in at an early stage, which allowed New York City residents to live farther from the commercial sector of the city. This new transit mode supported development by opening up new land with low-cost mobility (Schweitzer, 2017), with a fare of only five cents upon the system's introduction. The BRT (which would later become the BMT) shortly followed suit with its own subway lines. Together, the subway lines owned and operated by these two private subway companies would comprise the first subway system in New York City. This first subway system was extremely successful during its first twenty years or so, with visitors from all over the world. Though such behaviors would likely be scoffed at today, the system was praised so much by riders that some of them rode the subway just for fun (Bresiger, 2015).

Unfortunately, all good eras must come to an end. Anti-private sentiment grew despite private funding jumpstarting the entire subway scene in New York City. The two private companies wanted to increase the fare from a nickel in order to continue exceptional service and

expand the subway system. Yet, the IRT and the BMT were portrayed as greedy corporations by politicians, such as Herbert Croly and William Jennings Bryan, and Good-Government Club members ("goo-goos"). The goo-goos sought permanent reforms in municipal governments to prevent corruption (Tucker, 1894). When private companies opened and began operating the city's subway lines, the goo-goos distrusted them, believing private intentions to always be corrupt. The actions by the private railroad critics slammed the IRT and BMT by preventing the fare from increasing beyond a nickel. This prevented the companies from generating profits that hindered further growth and development as "[t]hey could not generate enough money to keep up the subway standards of the first fifteen years" (Bresiger, 2015). With the inflation of World War I, the IRT and BMT suffered financially as they could not raise fares to keep up with inflation. In addition, anti-private sentiment led to the city creating its own subway system, the Independent (IND) to compete with the other two companies, further straining the IRT and BMT financially (Bresiger, 2015).

The bankrupt IRT and BMT eventually was taken over by the city in 1940 and a slow unification of the IRT, BMT, and IND lines began to occur. The city government claimed that the subway would be much better under its control as it took over the former private subway lines and began its reign over the New York City subway system (Bresiger, 2015).

The Problems of New York Government Operation

The government's claims were simply not true. After the government ousted the private subway companies and brought the subway system under its control, the overall quality of the New York City subway deteriorated. The government was not able to replicate the success that the private subway companies enjoyed in the early twentieth century. Numerous transit-worker

union strikes in the mid-twentieth century weakened government control (Bresiger, 2015). The subway became politicized, rather than simply a means of public transit.

The politicization of the subway meant that nobody wanted the responsibility for it.

Mayor William O'Dwyer received "thousands of angry letters when the fare was raised to ten cents in 1948" (Bresiger, 2015). Politicians seeking reelection could not ignore the subway, but they could deflect responsibility onto others.

Thus, politicians created the MTA in 1968, and accountability was shifted from these politicians to the authority. No longer directly responsible for controversial union strikes or unpopular fare increases, the reputations of politicians and reelection odds were safe (Bresiger, 2015). Dodging subway issues is still prevalent in incumbents New York City Mayor Bill de Blasio and New York State Governor Andrew Cuomo. They point fingers at each other for who is responsible for the city's public transit, and the irony is that both of them barely use the subway by their own admissions (Rosenthal et al., 2017). There is a disconnect in transportation issues between city residents and the city's governing entities. Officials may praise the subways, but they don't take it themselves. Should those two be reliant on the inefficient subway system, upgrading the subway would definitely be higher on their priority lists.

Some in the government actively opposed expanding public transit infrastructure. In fact, one man "held several appointive offices and once occupied 12 positions simultaneously, including that of New York City Parks Commissioner, head of the State Parks Council, head of the State Power Commission and chairman of the Triborough Bridge and Tunnel Authority" (Goldberger, 1981). As he racked up titles and positions, his power in the city grew (Caro, 1974). His name was Robert Moses.

Touted as "the master builder", Robert Moses was an influential figure in landscaping modern New York City. But even with many accolades, he was a controversial figure, especially after Robert A. Caro publicized a scathing biography about him in *The Power Broker: Robert Moses and the Fall of New York*.

A characteristic theme of Moses's career was his disdain for public transit. Believing automobiles to be the future, he was obsessed with highway and bridge construction in New York City. There are many examples of his opposition to public transit (Nonko, 2017).

Integrating rapid transit into the Long Island Expressway, for example, would have cost less than \$100 million, less than a fifth of the entire project cost. To simply incorporate the infrastructure for future mass transit, it would have only cost \$20 million (a mere 4 percent more) at the time of construction (Caro, 1974; Nonko, 2017). Moses could have drastically improved the capacity of the Long Island Expressway with public transit if he chose to; he had the resources and power to do so. But he craftily began construction before consulting firms could finish estimates of including public transit, making their analyses and arguments moot (Caro, 1974).

A similar situation happened with the Wyck Expressway to John F. Kennedy Airport. Subsequent price estimates for the incorporation of public transit into the expressway were at \$300 million versus the mere additional \$2 million during construction had he reserved space for future mass transit developments on the expressway to begin with (Nonko, 2017). Moses also opposed the city's plans to build the Second Avenue Subway twice by reallocating funds towards his automobile-oriented projects. Indeed, Caro claims that "in January 1955, the [Triborough and Port Authorities] had a combined immediate fundraising capacity of about a billion and a quarter dollars... [which] could have built a wonderful transportation system for New York and its suburbs" (Caro, 1974). Rather than investing this money in a city where public transit is

dependent upon by so many, Robert Moses restricted the money towards highways and bridges through the recommendations of the Joint Study of Arterial Facilities conducted by the Port Authority and a Triborough Authority under Moses's leadership. The city was forced to implement the recommendations of the study, which "led to the building of the Throgs Neck Bridge, the Verrazano Narrows span, the second deck of the George Washington Bridge and a series of connecting highways" (Doig, 1990).

In attempting to solve New York City's traffic problems, Moses shuttled funding towards bridges and highways (Caro, 1974). Both the closed-mindedness and stubbornness of Moses in this regard is astounding. His personal biases towards the automobile over public transit led to his refusal to cooperate to better the public transportation of millions of city residents, many of whom are dependent on the subway. It is unfortunate because it is evident that Moses did not comprehend the concept of induced demand, given the traffic that these bridges, tunnels, and highways experience. It was not understood by Moses that more roads to drive on would incentivize more people to use said roads, thereby engaging in a feedback loop that causes more traffic and does not fix congestion. Like the New York politicians described previously, perhaps this was caused by his isolation from first-hand experience. Moses had never once driven himself: he was always staffed by a 24/7 squadron of chauffeurs (Millard, 2014).

It is not just Robert Moses though. Many New York City mayors and New York State governors have sought to reduce financial support to the MTA. The biggest blow began with New York City Mayor Rudy Giuliani, who started a snowball effect of declining devotion to the MTA. In the past, the city funded about 10 percent of the MTA's overall budget. But Mayor Giuliani slashed the MTA's budget by \$400 million. Mayor Giuliani defended his move because the city was unable to raise funds due to a fiscal crisis, and he pointed out that the MTA had a

surplus that year. When the mayor executed his plan, there were no immediate consequences of doing so (Rosenthal et al., 2017).

This gave subsequent government leaders in New York the impression that they could siphon funding from the MTA without experiencing any problems. Mayor Michael Bloomberg did not increase the subway funding to keep up with inflation (Rosenthal et al., 2017). This is remarkably similar to how the government ousted the private companies by refusing approval to raise the fare from five cents in response to World War I inflation. Incumbent Mayor de Blasio has declined to increase operating subsidies and provide additional funding to address delays. Though the subway helped raise property values, none of those property taxes were ever funneled back (Rosenthal et al., 2017).

New York State governors are not much better. The state governor at the time of Mayor Giuliani's term was Governor George Pataki, and he was proposing his own cuts in addition to Mayor Giuliani's. Governor Pataki eventually eliminated subsidies for the MTA and redirected \$200 million from MTA funding to supplement his state income tax cuts. In more recent times, incumbent Governor Cuomo "forced the M.T.A. to send \$5 million to bail out three state-run ski resorts that were struggling after a warm winter" (Rosenthal et al., 2017).

Evidently, these government officials do not regard public transit very high on their list of priorities. Many of their actions have caused the subway system to continually deteriorate over the years and New York City went from having one of the most remarkable subway systems to one of international embarrassment. It took a summer's worth of subway catastrophes, dubbed "The Summer of Hell", in 2017 for government figures to officially recognize the transit crisis of New York City (The New York Times, 2018). Public transit concerns were evident: a simple Google search brings up many newspaper articles from 2017 depicting the transit crisis. While

Governor Cuomo has pledged to play a role in modernizing the archaic system (because ignoring it would likely not bode well for him), the current state of the subways is far from acceptable.

Why Foreign Subways Are Better

Certainly, the governmental operation of New York City's subway system is quite inefficient. Private subway companies, on the other hand, would not suffer the same levels of inefficiencies that government-operated subways do. Both the government and private subway companies rely on good public perception to retain their current positions. However, their approaches to when something goes awry are very different. Politicians rely on public perception to remain incumbent and this means pleasing voters and other influential politicians (Schweitzer, 2017). Therefore, should the subway or the MTA encounter difficulties, the instinct of a politician would be to distance himself from the situation to preserve his image. Private companies cannot do the same thing because for them to thrive, they must be able to remedy the obstacle in order to continue providing good service and retain ridership. This incentivizes private companies to be inherently more efficient than government when it comes to the operation of public transit. Many privatization advocates suggest that the private sector could improve service, capital costs, and farebox recovery numbers simply through better management, something that the government is not well-versed in (Schweitzer, 2017).

The United States does not have to look far for examples of effective and modern subway systems. Numerous countries have successful mass transit systems capable of shuttling millions of riders daily without delay. The most prominent example of this is China, having the largest investments in rail transit infrastructure since 1990 (Niedzielski & Malecki, 2012).

In 2008, China had 803.6 kilometers of urban rail transit service length. A mere seven years later and that number had quadrupled to an exceptional 3293 kilometers by the end of 2015

(Lu et al., 2016). China was laying down an average of 373.5 kilometers annually of tracks in the early to mid-2010s, with a peak rate of 466.7 kilometers laid in 2013. Meanwhile, the MTA is struggling to build the Second Avenue Subway, something it has touted over the heads of riders for decades. Although not quite an apples to apples comparison, as China is a country and New York City is not, it still nonetheless demonstrates a stark contrast in efficiency.

The reason why China is dominating the mass transit market is unsurprising. China puts massive amounts of money into mass transit. "In 2015, 368 billion RMB (approximately equivalent to 56.6 billion US dollars) has been invested into urban rail transit construction, an increase of 27% compared with the same period in 2014" (Lu et al., 2016). In comparison, the MTA reportedly received \$10.1 billion in contributions from New York City to operate (Stringer, 2015). But \$4.4 billion of that \$10.1 billion comes directly from the farebox, making the contribution from the city government itself only \$5.7 billion. In terms of subsidies, the city government only gave \$861 million (Stringer, 2015). Again, not an apples to apples comparison but the vast difference in financial support between the two is clear. In China, the urban rail system is managed through municipal governments and local companies. Rather than the Chinese government attempting to assert control over all rail and subsequently refuse financial support like in New York City, the Chinese government invested heavily in mass transit leading to its success.

Japan is another prominent example of excelling with mass transit. Interestingly, the nation's railway history is remarkably similar to that of New York City's. Japan began with private railways at first. The Japanese government eventually acquired many of the private railways when it passed the Nationalization Act in 1906 (Calimente, 2012), not unlike the New York City government acquiring the IRT and BMT companies. However, this is where Japan and

New York diverge. Whereas the New York City government acquired the entire subway system, the Japanese government left some private railways intact. A consequence of the Nationalization Act meant that these remaining private railways could not build lines that competed with government-owned lines. This posed a financial problem for these private Japanese railways as the profitability of having these lines steeply declined. But because they were private companies, they were able to bounce back. As private companies, there were no restrictions on seeking profits outside of railways to diversify their income sources. Many of these private railways turned to real estate and transformed properties near their train lines into popular attractions. Thus, the private Japanese railways prospered with significant revenue and high ridership, allowing them to create mass transit of high efficiency and desirability. Despite little financial support from the Japanese government, the private railways thrived (Calimente, 2012).

If the railways were entirely managed by the government, they would not have been able to pursue other profitable ventures to improve their transit services. Because some of the railways in Japan were private, they were able to seek out other sources of income rather than solely relying on the farebox and the government. "Rather than relying strictly on farebox revenue and taxation, transit agencies in North America should be freed to develop other revenue sources, just as the Japanese private railways have done to great success" (Calimente, 2012). It is a tad ironic because the United States is supposed to embody the concept that competition breeds innovation, and yet, the New York City government essentially monopolized the entire subway.

Both China and Japan also heavily discourage driving. The former had bad air pollution and saw mass transit as a way to curb smog emissions while providing its growing population a means of transportation. The latter had limited amounts of land and little domestic oil reserves, so it encouraged mass transit by making driving expensive and inconvenient (Calimente, 2012).

These nations had the foresight to see that continued dependency on the automobile would spell trouble for their respective reasons. Unfortunately, Robert Moses was unable to foresee the many issues brought about by driving, issues that plague much of the United States as a whole. In fact, Asian cities have recently heavily invested in mass transit and the pace of investment has continued to increase over the last two decades (Niedzielski & Malecki, 2012). "In the first decade of the twenty-first century, Asia accounted for 52 percent of new systems, 64 percent of new kilometers, and 59 percent of new stations alone" (Niedzielski & Malecki, 2012).

Even European countries began to privatize mass transit. The British government placed Network Rail, a private non-profit company, in charge of British railways. This helped deregulate railways at the national level, though the British government later would reclaim some of that control through the Railway Acts of 2003 and 2005 (Riot, 2014). France, though reluctant, was also trying out a competitive rail model where it moved from a "state monopoly on rail activities towards an open sector" (Riot, 2014).

Technological Issues and Poor Spending

So what are the issues that are causing the New York City subway to be so unreliable? The answer is the signal, the nervous system of the entire subway. The signals are archaic, as many of them were built before World War II, meaning that they are well beyond their intended lifespan (Fitzsimmons, 2017). The cloth-covered cables for these signals are flammable and could result in track fires that further delay the trains. These outdated signals are incapable of precisely locating the trains, meaning that a larger buffer space must be used between trains, resulting in fewer trains that may be run on a line with these antique signals. Even with modernized computer signals, the process of upgrading took several years for a single line.

The signals are in such a state of disrepair in part because of little governmental support but also because of irresponsible spending when it comes to the limited budget of the MTA. A common theme of flamboyance over functionality can be seen in many of the MTA's projects.

Fulton Street station is a big offender with regards to appearance over function. The station was damaged in the September 11th attacks and had to be rebuilt. Sheldon Silver, the speaker of the New York State Assembly at the time, was a powerful politician and the Fulton Street station was part of the district that he represented. Silver demanded that the damaged station be rebuilt in a grandiose manner, complete with glass domes and mirrors. By 2008, the MTA realized that the project was significantly over budget and they wanted to scale it back. But Silver threatened to veto the MTA's funding should they not comply, leaving the MTA with no choice. "In the end, the project cost \$1.4 billion — more than the total annual budget of Chicago's rapid transit system — and did nothing to improve the subway's signals or tracks" (Rosenthal et al., 2017).

Incumbent Governor Cuomo himself ordered the MTA "to spend nearly \$1 billion on enhanced lighting, signs, countdown clocks and other upgrades at dozens of stations, many of which were not considered most in need of rehabilitation by M.T.A. leaders" (Rosenthal et al., 2017). In addition to that, millions of dollars were instructed to be spent on other unnecessary bells and whistles such as fancy lights, internet access, phone-charging ports, and painting the state logo on subway cars (Rosenthal et al., 2017).

The MTA estimates that it will need nearly \$68.3 billion from 2015 to 2034 to fully fund repairs, upgrades, and maintenance of all of its capital assets; this excludes new routes and extensions. Of that \$68.3 billion, signals make up the majority of that amount, with an estimated \$15.6 billion to upgrade and maintain signals alone (Metropolitan Transportation Authority,

2013). While 76.4 percent of signal related needs are funded, there is still a funding gap that is expected to grow if the current rate of investment is sustained. If investment is not increased, this funding gap could reach \$4.3 billion by 2034. In addition, there is also a funding gap for subway cars as well. Modernized subway cars are also of utmost importance because they work in conjunction with the new computerized signals. Without investment in subway cars, the old ones are not able to take advantage of the upgraded signals, resulting in little to no net improvements. The subway car funding gap could expand to \$3.8 billion if only 54.5 percent of subway car needs continue to be met (Shaviro et al., 2019).

The MTA should be focusing its resources on the essentials. Signals, subway cars, and the essential infrastructure that New York City residents do not get to see, should be funded rather than unnecessary projects like the Second Avenue Subway, which costs over \$2.5 billion per mile to construct and does not improve the existing system's efficiency (Rosenthal, 2017).

Speaking of which, the MTA is overpaying on all operational costs and projects that it is undertaking. The Second Avenue Subway is a notable example, heralded in a New York Times article as "The Most Expensive Mile of Subway Track on Earth" (Rosenthal, 2017). In contrast, foreign cities like Madrid and Paris pay \$58 million per kilometer (Sisson, 2017) and \$450 million per mile (Rosenthal, 2017), respectively. A primary reason for this large difference is due to the influence of unions. These unions, particularly the Transit Workers Union (TWU), have been powerful since the mid-twentieth century (Havelick, 1983). Back then, they brought New York City down by stopping public transit services with public transit strikes. The city had no choice but to cater to these powerful unions. They still exert a considerable influence today, as unions working on MTA projects have donated more than \$1 million to Governor Cuomo's administration (Rosenthal, 2017).

These unions work with construction companies in a way that causes the MTA to lose "productivity", a term used by Franklin J. Havelick to describe "providing services cheaper, better, quicker" (Havelick, 1983). This cooperation between unions and construction companies is a losing situation for the MTA. The unions can grant transit workers higher wages due to their political influence and the construction companies drastically increase the cost of the overall projects with unnecessary construction workers, which benefits them because they take a cut of the total project cost. The Second Avenue Subway is overstaffed, with workers assigned to automated machines that do not require manual supervision (Rosenthal, 2017).

Even regular operations are tremendously expensive for the MTA due to the influence of the Transit Workers Union. The total earnings of the average subway worker is about \$155,000 annually. Administrative employees make on average \$240,000 in total earnings. Between 2009 and 2016, members of the Transit Workers Union received a pay increase of 19 percent compared to members of the city's teachers union with only a 12 percent increase (Rosenthal et al., 2017). It makes sense that "the single, most important source of cost reduction, if not service improvement, in New York City government has been workforce reduction" (Havelick, 1983). The MTA is forced to overpay its workers and provide numerous benefits due to the political power of these unions. While supporting unions is great, that does not mean that the unions should be able to abuse and milk a public authority that many people depend upon.

Effects of A Crumbling Subway System

Economically, the New York City Comptroller estimated that in 2017, the costs of lost productivity from subway delays could range from \$170 million in best-case scenario major delays and up to \$389 million in worst-case scenario major delays (Stringer, 2017a). A single subway line, the 5, may be responsible for up to \$31.5 million annual costs of lost productivity. The other lines are not much better: there are only five non-shuttle lines (i.e. non "S" lines) out of seventeen that have an annual cost of productivity loss of under \$10 million (Stringer, 2017a).

This demonstrates just how much of an impact subway delays can have on the livelihoods of New Yorkers, both on a professional level and a personal level. In a survey conducted earlier that year by the New York City Comptroller, it found that out of 1,227 total respondents, 74 percent were delayed for a work-related meeting, 18 percent were reprimanded, 13 percent to lose wages, 22 percent were late for a job interview, and 2 percent were even fired from their job (Stringer, 2017b). Outside of work, 65 percent of parents were late to pick up, drop off, or attend their child's event and 29 percent were late to a medical appointment (Stringer, 2017b).

A cause for alarm is that these effects appear to disproportionately affect low-income neighborhoods of the city. The same survey found that residents of lower-income zip codes were 14 percent more likely to be reprimanded at work due to subway delays, amongst other occupational consequences. Most of the low-income regions of New York City in 2020 are in the Bronx (Kolmar, 2020). As such, it is no surprise that the survey respondents from the Bronx were 68 percent more likely to grade subway performance with a "D" or an "F" (Stringer, 2017b).

Subway delays aside, residents of low-income neighborhoods have been severely mistreated by public transit in general. The Bronx is an example where predominantly low income, black communities had been neglected by government officials since, yet again, Robert

Moses. The Cross Bronx Expressway split previously unified communities like a "Great Wall of Bronx" (Blaine, 1995). The Cross Bronx Expressway was one of Moses's crowning projects; this is the same man who, by some accounts, deliberately designed Long Island bridges to be low to prevent buses from entering the city. The motivation behind this design varies from source to source. Some say he did it to prevent anyone who could not afford an automobile, and therefore had to take the bus, from commuting in (Nonko, 2017). Others say it was to specifically prevent black people from entering (Blaine, 1995). Contemporary examples of neglect include having trains skip through Harlem during rush hour to benefit white communities despite the many West Harlem residents waiting for a train and waiting until Central Harlem's subway stations leaked rainwater onto the platforms to begin making repairs (Blaine, 1995).

Even those with respectable occupations in the healthcare industry find themselves at the mercy of the subway systems. Healthcare is the number one employing industry in New York City, with about half a million jobs (González-Rivera, 2018). There are special circumstances that apply when working in healthcare. Hospital workers typically work eight to twelve-hour shifts and cannot leave until their replacements arrive to take the next shift. Home health aides may need to visit multiple patient homes on a given day, requiring them to travel across the city. It is fairly obvious how subway delays impact would have a dramatic impact on the professional lives of healthcare workers.

Delays undoubtedly reduce job satisfaction for hospital workers as they are forced to cover for their late peers due to no fault of their own or their peers. Higher job dissatisfaction leads to higher turnover rates for hospital workers. Having hospital staff in high spirits is psychologically crucial to elicit the best performance; tired hospital workers from long work hours and delayed commutes are more prone to lapses in cognitive function. That is all in

addition to throwing tight hospital schedules right out the window if hospital workers face delays in commuting (Weintraub et al., 2018).

For home health aides, the impact is worse because they have to commute to multiple elderly homes throughout the day. Being late can have disastrous consequences not just for the health aide. "Sometimes it's about life and death," says Amanda Frey, the director of human resources for Alliance Homecare. "The patient is waiting for medication or to get meals at a certain time because they're diabetic" (Weintraub et al., 2018). Subway delays put everybody in a tough situation. Healthcare agencies cannot reimburse healthcare workers if they take other transportation to work when the insurance companies deny "transit delays" as a satisfactory justification. Supervisors are often pressured by clients to discipline tardy healthcare workers but are hesitant to do so because they fully understand where the employees are coming from.

Meanwhile, healthcare workers are mentally strained by the effects of transit delays with "[a] survey of home health aides [finding] that transit was the number two cause of stress, second only to the death of a family member" (Weintraub et al., 2018). The clients risk not receiving ontime service, which may have fatal consequences if a series of unfortunate events perfectly coincide.

Even temporary visitors to New York City are noticing the deterioration of the subway. Tourism provides around 300,000 jobs to the city and majorly contributes to the city's shopping scene (González-Rivera, 2018). It is saddening to see that the tourists' first experience of the city's lacking subway systems is right when they get off the plane; there are no direct subway lines that run from either LaGuardia Airport or John F. Kennedy Airport to the rest of the city. Combined with lugging heavy suitcases up and down staircases for stations that could be four

stories above ground and the fact that the top ten busiest stations in the city are all tourist-heavy areas, a recipe for a poor experience navigating the city emerges (González-Rivera, 2018).

Conclusion

The New York City subway has to do better. What initially began as a promising, lucrative mode of transit has devolved into a decrypted system way beyond its lifespan. The subway is indeed the lifeblood of the city, for it is what allowed the city to expand and prosper all those decades ago. The data has shown that delays have just been getting worse and worse in just several years; from what used to be an on-time performance of around 80 to 90 percent in 2010 has now dropped to around 60 percent in 2016, with some lines far under 60 percent (Stringer, 2017b). It took a transit crisis to force officials to do something about the subway when it has been in the making for years. While plans have been implemented to modernize the subways, the most notable being the Fast Forward plan, it may not be enough to combat the years of government negligence. Budget deficits are still prevalent as aforementioned, even with increased financial support to the subways.

With the current COVID-19 coronavirus pandemic of 2020, New York City bus and subway ridership have decreased by 50 and 70 percent, respectively (Berger, 2020). In the past twelve years, government officials have barely kept the MTA afloat through new revenue streams primarily in the form of taxes (Independent Budget Office of the City of New York, 2020). This will not be possible this year as many taxable industries such as travel are sliding backward due to the pandemic, and both the city and state governments face their own enormous financial challenges. With increased costs of running public transit (e.g. disinfecting buses and subways, personal protective equipment for workers, etc.) and a significant decrease in revenue

from both ridership fares and existing tax-based sources such as traditional taxis surcharges, the MTA faces an "existential crisis" as the coronavirus pandemic slams down another financial problem on the MTA's financially burdened shoulders (Independent Budget Office of the City of New York, 2020). While deep cuts to the MTA's services were avoided with the passing of a 2021 budget, "MTA Chairman Patrick Foye warned that the cuts, as well as thousands of layoffs, could still be implemented if the federal government doesn't come through soon with \$4.5 billion in aid" (Berger, 2020).

We can only hope that the subways of New York City will survive the century-long, turmoil-filled ride that it has been on thus far. If it hopefully does, let it be a lesson to future government officials, corporations, and city planners that investment in a good, reliable public transit system should not be delayed until it is too late.

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