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The Cross-Bronx Double Cross:

How the Cross-Bronx Expressway has Affected Pediatric Asthma in the Bronx

By

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Abstract

This paper will address the effect that the construction of the Cross-Bronx Expressway, in conjunction with specific government policies and practices, has had and continues to have on the inordinately high rates of pediatric asthma in the Bronx. Existing research on the subject tends to take a very segmented view. There has been much research done in the individual fields of the history of the Cross-Bronx Expressway and the Bronx's subsequent demographic change; more recently, studies have taken note of the Bronx's high asthma rates, the effect of various pollutants on children's lung function, pollution rates in the Bronx, and the difference in asthma rates among different races/ethnicities. All of this work has been done separately, each confined to its own particular field. This paper examines the findings in each of these fields and shows how all of these perhaps seemingly unrelated factors could actually be working together, affecting asthma in the Bronx. The overall goal of this paper is to show that the Cross Bronx Expressway and its aftereffects have contributed in part to the disproportionately high rates of pediatric asthma in the Bronx; as a result of these findings, I can argue that at least some portion of the Bronx's asthma burden is a consequence of the decisions of policy makers and government bureaucrats, and could therefore have been avoided.

I. Introduction

Throughout major cities in the United States, pediatric asthma rates are rising. This increase is occurring both in the number of children who are diagnosed with asthma, as well as in the number of asthma attacks experienced in children who already have the condition.¹ Noticing this trend, researchers have created several subtypes of asthma to make analyzing and combating it easier.² Rising asthma rates are of particular concern in the Bronx, which is afflicted with some of the nation's highest pediatric rates. In the Bronx, asthma mortality rates are "about three times higher ... than the national average. Hospitalization rates are about five times higher. In some neighborhoods in the Bronx it is estimated that 20% of the children have asthma."³ The Bronx also has some of New York state's highest pollution rates: "Bronx County is one of the ten counties in the state that exceed current federal air quality standards for fine-particle pollution."⁴ For 2011, the American Lung Association's "State of the Air" campaign, which provides detailed information on air pollution levels in all cities in the United States and then uses this information to assign each city a grade, awarded the Bronx an "F" for daily particle pollution exposure.⁵

The Bronx experienced a surge of decay and disrepair in the second half of the twentieth century, causing it to be known generally as the poorest of New York City's five boroughs. While there is no single cause of this deterioration, a large factor was the construction of the Cross Bronx Expressway. Built between 1948 and 1972, the six-lane expressway was the brainchild of Robert

¹ Ruth A. Etzel, "How Environmental Exposures Influence the Development and Exacerbation of Asthma." *Pediatrics: Official Journal of the American Academy of Pediatrics* 112, no. 1 (2003): 233.

² These classifications include "allergic asthma, exercise-induced asthma, asthma caused by bacterial and fungal infections, asthma in the elderly, and others. These different types of asthma have different triggers and may respond differently to treatments and interventions" Rae Zimmerman, "Asthma and Air Pollution: A Literature Review," in *South Bronx Environmental Studies: Public Health and Environmental Policy Analysis*, 65.

³ *Ibid.*

⁴ Manny Fernandez, "A Study Links Trucks' Exhaust to Bronx Schoolchildren's Asthma." *New York Times*, October 29, 2006, accessed August 2, 2011.

⁵ "State of the Air: New York, Bronx County," American Lung Association. Accessed August 2, 2011, <http://www.stateoftheair.org/2011/states/new-york/Bronx-36005.html>.

Moses, meant to run through the middle of the Bronx and connect the George Washington, Triborough, and Bronx-Whitestone bridges. To accommodate the Cross Bronx Expressway, thousands of Bronx residents were displaced from their homes. The chaos brought by the expressway's construction prompted many of those residents who could afford to leave to do so, leaving only the poorest residents.

Not only is the Bronx the poorest of New York City's five boroughs, its residents also report much higher than average rates of asthma, particularly children. In fact, "some neighborhoods in the Bronx are about three times higher than the national average," and "in some neighborhoods in the Bronx it is estimated that twenty percent of the children have asthma."⁶ Air pollution in general has been identified as a large contributing factor in the development of asthma, and recently more attention has been paid specifically to diesel exhaust particles, which "is of particular concern to residents of the South Bronx because a large number of diesel trucks drive in and out of the area as a result of activities such as waste transfer stations and other commercial activities."⁷ The bulk of these trucks travel on the Cross Bronx Expressway, which cuts straight through residential areas of the borough, putting residents directly in harm's way. The overall goal of this paper is to show that the Cross-Bronx Expressway and its aftereffects have contributed in part to the disproportionately high rates of pediatric asthma in the Bronx; as a result of these findings, I argue that at least some portion of the Bronx's asthma burden is a consequence of the decisions of policy makers and government bureaucrats, and could therefore have been avoided.

The first section of this paper addresses the history of the United States government's involvement in the housing market and industry, as well as that of so-called "urban renewal" programs that arose in cities (for this paper's purposes I will focus on New York City) in the mid-

⁶ Zimmerman, "Asthma and Air Pollution," 64.

⁷ *Ibid*, 67.

twentieth century. This section allows me to show how, thanks to U.S. government agencies, discriminatory policies became the norm in the housing market and urban planning. The following section provides a brief history of the Cross-Bronx Expressway and its immediate consequences and reverberations throughout the Bronx. With this section I demonstrate how Robert Moses, creator of the Cross-Bronx Expressway, used those prejudiced and unfair policies of the HOLC and FHA in his relocation of Bronx residents displaced by the Expressway's construction, causing those neighborhoods to deteriorate. The next section provides data on asthma rates in the United States and in underprivileged areas and demographics, particularly in the Bronx; this information shows how the demographic overhaul and housing degradation brought by the Cross-Bronx Expressway has impacted the Bronx's high asthma rates. In the following section, I recount my visits to various playgrounds that Robert Moses built alongside the Cross-Bronx Expressway, on extra land that had not been taken up by the Expressway. I interviewed several parents who had brought their children to the playgrounds, to gauge the general awareness of the issue of pediatric asthma among the Bronx community. With this section I illustrate how another contributing factor of the Bronx asthma problem is the lack of awareness of the issue as well as how to combat it. In the final section of my paper, I pull all of the preceding sections together in my final argument, establishing how each of these factors, all caused in a way by the Cross-Bronx Expressway, have contributed to the widespread problem of pediatric asthma in the Bronx.

II. History of US public housing & NYC "urban renewal"

Before the Great Depression, popular opinion held that the U.S. government had no business or responsibility in providing shelter to its citizens; until that point, the federal government's only involvement in this sphere was "a survey of slum conditions in large cities in 1892, the creation of a Federal Land Bank System in 1916, and the construction of munitions and arms workers' housing

during World War I.”⁸ Unlike the government housing programs that emerged in the mid-twentieth century, these instances were for the sole benefit of the government: “neither the result of a conscious effort to help the poor nor of an increased reform spirit.”⁹ These established priorities are telling for the future “urban renewal” efforts seen in American cities in the mid-twentieth century, when policymakers claimed to be working for the betterment of those poor living in the “slums,” but the actual effect of these efforts was to exacerbate the problems of city slums and spread urban blight.

The Great Depression spurred a foundational shift in what Americans expected of their government, however, and this new set of demands included the provision of housing. On July 22, 1932, President Hoover signed the Federal Home Loan Bank Act “to establish a credit reserve for mortgage lenders and thus to increase the supply of capital in the housing market.”¹⁰ The Federal Home Loan Bank Act soon proved ineffective, and was replaced with the Home Owners’ Loan Corporation (HOLC), an organization tasked with refinancing homes and granting low-interest loans to homeowners in the hopes of preventing Americans from losing their homes. The HOLC created the concept of “systematized appraisal methods” nationwide by dividing the country into specific areas and evaluating each area with an official questionnaire “relating to the occupation, income, and ethnicity of the inhabitants and the age, type of construction, price range, sales demand, and general state of repair of the housing stock.”¹¹ The initial purpose of this method was to enable the HOLC to easily operate on a nationwide scale, but this innovation had the unintended consequence of the creating “red-lining” practices.

⁸ Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (New York City: Oxford University Press, Inc., 1985), 191-192.

⁹ *Ibid*, 192.

¹⁰ Jackson, *Crabgrass Frontier*, 194.

¹¹ *Ibid*, 197.

The HOLC evaluated literally every block in every neighborhood in the United States, assigning each a grade and a corresponding color, with red representing the lowest grade.¹² Essentially, red-lining is the practice of encircling an entire neighborhood (on a map) with a red line, meant to signify that the area was in a state of collapse and ruin past any hope of repair and therefore that giving any loans to inhabitants there was far too risky. Neighborhoods that were “red-lined” were overwhelmingly African-American and/or “any areas characterized by poor maintenance or vandalism.”¹³ HOLC appraisers were taught to accept that “the natural tendency of any area was to decline” and therefore that even the smallest “undesirable” quality (such as an aging building or a poor and/or minority family) was enough to mark a neighborhood as a lost cause.¹⁴ Appraisers would then assign the neighborhood a lower grade, which would discourage investors from putting any money into the area and accelerate the neighborhood’s decline. This pessimistic mindset about area deterioration would remain prominent through Robert Moses’ era in New York City, when Moses, as head of the Slum Clearance Committee (a board created in 1949 to combat NYC slums by tearing them down and replacing them with theoretically more desirable housing structures), decided that the best way to combat the growth of slums and to stimulate “urban renewal” was to entirely demolish existing slums, pushing the residents into other poor areas, and therefore actually creating more slums.

The federal government’s next step in involvement in the housing market was the creation of the Federal Housing Administration in 1934 and the Veterans Administration (VA) in 1944. Both organizations were created to “induce lenders who have money to invest it in residential mortgages by insuring them against loss on such investments, with the full weight of the United States Treasury

¹² *Ibid*, 199.

¹³ *Ibid*, 198.

¹⁴ *Ibid*.

behind the contract.”¹⁵ Significantly, the FHA (and therefore the VA, which followed FHA procedures) adopted “HOLC appraisal methods, and probably the maps themselves.”¹⁶ The FHA took the HOLC’s institutional bias against heavily ethnic and/or poor neighborhoods to a new level by allowing “personal and agency bias in favor of all-white subdivisions in the suburbs to affect the kinds of loans it guaranteed – or, equally important, refused to guarantee.”¹⁷ Of the eight criteria established by the FHA to evaluate neighborhood quality, “economic stability” (which counted for 40% of the overall rating) and “protection from adverse influences” (20%) together counted more heavily than the other six criteria combined. Predictably, “both were interpreted in ways that were prejudicial against heterogeneous environments.”¹⁸ Put plainly, the FHA “feared that an entire area could lose its investment value if rigid white-black separation was not maintained.”¹⁹ To this end, the FHA not only avoided areas that were currently predominantly ethnic but also those they predicted (perhaps by the presence of a single minority family in a neighborhood) would soon become that way.²⁰ These suspect methods employed by the FHA resulted in the hastening of inner city decline and decay by keeping all loans and financial aid out of those areas. Whereas “previously, prejudices were personalized and individualized, FHA exhorted segregation and enshrined it in public policy.”²¹ Replying to this criticism, the FHA generally countered “that it was not created to help cities, but to revive home building, to stimulate home ownership, and to reduce unemployment.”²² While the U.S. government may have meant well in the creation of institutions like the HOLC and FHA, the practices employed had significant and lasting consequences, with the government “[putting] its seal

¹⁵ Jackson, *Crabgrass Frontier*, 204.

¹⁶ *Ibid*, 203.

¹⁷ *Ibid*, 207.

¹⁸ *Ibid*.

¹⁹ *Ibid*, 208.

²⁰ *Ibid*, 208-209.

²¹ *Ibid*, 213.

²² *Ibid*.

of approval on ethnic and racial discrimination.”²³ This resulted in the abandonment of those areas most in need of its help.

Once the Great Depression subsided, even in the economic boom America experienced with the end of World War II, the government [remained in the spot it had carved out for itself in the housing market. While these government programs had initially been targeted at Americans who had fallen on hard times, after WWII, these programs began to deal mostly with accommodating the massive influx of immigrants into American cities. New York City, inundated with vast numbers of “demobilized vets, blacks, and Puerto Ricans,”²⁴ felt the effect of these new residents more acutely than many other cities. Overcrowding was quickly becoming a serious problem in New York City, as “decent neighborhoods [were transformed] into slums, and as the new slums spread into larger areas.”²⁵ To resolve the housing problem, NYC officials decided to start a public housing program.

In 1949, the U.S. federal government passed a new Federal Housing Act, which introduced the concept of “urban renewal” as a new approach to overcrowding in city housing. “For the first time in America, government was given the right to seize an individual’s private property not for its own use but for reassignment to another individual for *his* use and profit.”²⁶ The project, having a billion dollars in funding to start (to which much more money would be added later), was also more immense than any previously undertaken by the government.²⁷ What this meant was that the government would now be able to select an area that officials designated a slum, seize all private property therein, and tear it all down to be replaced with so-called better public housing. For example, Title 1 of the 1949 Housing Act “required that ‘there be a feasible method for the

²³ *Ibid*, 217.

²⁴ Jill Jonnes, *We’re Still Here: The Rise, Fall, and Resurrection of the South Bronx* (Boston: Atlantic Monthly Press, 1986), 202.

²⁵ Jonnes, *We’re Still Here*, 102.

²⁶ Robert A. Caro, *The Power Broker: Robert Moses and the Fall of New York* (New York City: Random House, 1974), 12.

²⁷ *Ibid*.

temporary relocation of families displaced from the project area' into 'decent, safe, and sanitary dwellings.'"²⁸ Much of the time, however, this stipulation was manipulated or outright ignored by public officials.

When it came to "urban renewal" and public housing, New York City was slightly ahead of the federal government. Several months before Congress passed the 1949 Housing Act, Robert Moses convinced NYC Mayor O'Dwyer to create a Mayor's Slum Clearance Committee, with Moses as chairman. The Committee's task was just what its name suggests: to clear slums. As its head, Moses wielded uncontested and absolute control over all urban renewal projects in New York City for a decade.²⁹ Moses saw an even greater increase in his power with the passing of the 1949 Housing Act, because of its provisions for eminent domain. Moses also enjoyed the total support of New York City elected officials, who did not refuse or significantly modify any of Moses' slum clearance proposals.³⁰

One of Moses' largest "slum clearance" endeavors, begun in 1954, took place on the West Side of Manhattan, where Moses appropriated several blocks of Manhattan real estate, and immediately sold it to the private construction firm Caspert and Company for a fraction of the land's actual value (the six square blocks were worth \$15,000,000, and Caspert and Company purchased it for \$1,000,000). Rather than completing their task in a timely manner, Caspert and Company proceeded to milk the neighborhood for as much extra money as they could. They put off demolishing the buildings, opting instead to have tenants continue to pay rent to them, as well as even trying to obtain funding for construction of new buildings.³¹ Caspert and Company, this so-called "reliable bidder," stood by as landlords broke up condemned apartments into ever-smaller units, squeezing

²⁸ Jonnes, *We're Still Here*, 227.

²⁹ Caro, *The Power Broker*, 207.

³⁰ *Ibid*, 752.

³¹ *Ibid*, 980.

more and more people into smaller and smaller spaces.³² The overall effect of the mismanagement of the Manhattantown slum clearance project was the undeniable spread of blight out from the area. Residents displaced by the demolition relocated in the blocks immediately adjacent to the development. These streets, traditionally poor but well-maintained, became in little over a year, “a slum, a teeming, seething hive of humanity.”³³

It was not only those sites that were handed over to private firms which suffered inordinately from Moses’ so-called “slum clearance” and “urban renewal” programs: the projects that he himself headed yielded similarly disastrous results for the neighborhoods and their residents. Whenever Moses proposed a new slum clearance project, he would release statements, backed up with “columns of statistics,” claiming that displaced families would receive “preferential status” and “financial assistance” to obtain housing in the new developments as was required by Title 1 of the 1949 Housing Act. Contrary to these assertions, much of this data was exaggerated or entirely fictional. As it is, existing public housing was filled to capacity, and it was apparent from studying the numbers that the amount of housing that Moses was planning on building was not enough to accommodate even a fraction of the number of displaced tenants Moses claimed he would move into those units. In reality, Moses “[used] the same public housing vacancies for many projects”³⁴ and was almost entirely indifferent for the welfare of the displaced tenants. In the end, anywhere from a third to more than half (depending on the project) of displaced families’ files were marked “Disappeared – whereabouts unknown.”³⁵ They were clearly not provided for as mandated by Title 1. In the statistics he provided for the Manhattantown project, Moses claimed that 998 of the 3,628 families living in the condemned buildings would be able to afford apartments in the proposed new

³² Caro, *The Powerbroker*, 964.

³³ *Ibid.*

³⁴ *Ibid*, 963.

³⁵ *Ibid*, 969.

buildings. These families had been paying an average of \$10 a month per room for rent, which was the most that the vast majority of families could afford. Moses planned for rent in the new Manhattantown apartments to be \$34 a month per room.³⁶ In addition, Moses actively discouraged evicted families from applying at all for the new apartments, despite the fact that he had claimed that these families would be given “preferential status” in applying.³⁷

Aside from the sheer numbers, the most noticeable aspect of the people displaced for these “urban renewal” projects was that they were overwhelmingly of minority ethnicities, particularly African American or Puerto Rican. According to the 1950 census, only twelve percent of New York City’s residents were not white, but at least thirty-seven percent of Moses’ evictees (according to Moses himself) were nonwhite.³⁸ Those evicted were also among the poorest of New York City’s residents: “In 1951, the federal Bureau of Labor Statistics found that \$4,083 was needed for a family of four to maintain a minimum standard of living for a year. Only one out of every four of the evicted families earned \$4,083 per year; 20 percent earned less than \$2,000 per year.”³⁹ Unable because of their color and poverty to find better housing, these refugees “had no place to go but into the already overcrowded slums.”⁴⁰ Through his efforts to solve the problem of slums in New York City, Moses actually made it worse.

III. History of the Cross-Bronx Expressway & resulting urban decay

The Cross-Bronx Expressway was part of a nationwide movement to build more highways, all in the name of national defense. Built between 1948 and 1972, the six-lane Cross-Bronx Expressway was the brainchild of Robert Moses and was meant to run through the middle of the Bronx and

³⁶ *Ibid*, 972.

³⁷ *Ibid*.

³⁸ *Ibid*, 968.

³⁹ Caro, *The Powerbroker*, 968.

⁴⁰ *Ibid*, 20.

connect the George Washington, Triborough, and Bronx-Whitestone bridges. To accommodate the Cross-Bronx Expressway, thousands of Bronx residents were displaced from their homes. The chaos brought by the expressway's construction prompted many of those residents who could afford to leave to do so. As a result, only the poorest residents were left behind. Robert Moses hinted at his plan for the Cross-Bronx Expressway in 1945 and said, "it is being worked out with the wholehearted cooperation of the City, State and Federal officials. It has, I believe the support of business, civic, and other organizations of the Bronx."⁴¹ Prophetically, he wrote that "its effects on the Borough will be enormous, and few people outside the public officials involved can visualize the future which these and other postwar improvements will usher in."⁴² Moses knew that his proposed route (which cut straight through the heart of the Bronx, displacing thousands of families would greatly upset residents of the area, but here he is already preparing for that fight, claiming that those residents would make a fuss only because they were ignorant and lacked the foresight to see what he saw: the supposed good that it would do for the borough and all of New York City in the long run. But this twisted logic forgets that there is perhaps no one who is *better* qualified to judge what is best for a neighborhood than those who spend every day there, year after year, for perhaps an entire lifeti. Just as with his public housing projects, however, Moses' plan for the Cross-Bronx Expressway enjoyed the full support of Bronx County officials, most prominently Borough President James Lyons and the Bronx Board of Trade, which believed that the expressway would make the borough "more accessible, more attractive to business."⁴³

Despite claims that the Expressway would be a boon to the Bronx, Robert Moses' planned route had the road "[hack] through one solid Bronx neighborhood after another."⁴⁴ Residential buildings

⁴¹ Jonnes, *We're Still Here*, 120.

⁴² *Ibid.*

⁴³ *Ibid*, 122.

⁴⁴ *Ibid*, 120.

were not the only things standing in the Expressway's proposed path: "The path of the great road lay across 113 streets, avenues and boulevards; sewers and water and utility mains numbering in the hundreds; one subway and three railroads, five elevated rapid transit lines, and seven other expressways or parkways, some of which were being built by Moses simultaneously."⁴⁵ The proposed route would cause so much destruction that at first, Bronx residents refused to take it seriously, maintaining that the government would protect them. They were wrong.

The Bronx neighborhood of East Tremont bore the brunt of the Cross-Bronx Expressway's destruction, as it would see the demolition of "fifty-four apartment houses, ninety one- or two-family homes and fifteen one-story 'taxpayers' housing sixty stores, for a total of 159 separate buildings."⁴⁶ Horrified by this proposed route, East Tremont residents banded together and presented an alternate route, which would change the road's proposed path minimally and would even save the city money. East Tremont residents proposed that the Expressway keep a straight path, rather than swing north slightly through East Tremont and run alongside the northern border of Crotona Park. This alternate plan required the demolition of only six buildings, and most of the right-of-way was already city property,⁴⁷ nor would the road be made any longer or sharpen its curves – "its efficiency as a traffic-moving device [would] not be harmed in the least."⁴⁸ In fact, the East Tremonters' route would cost the city more than \$10,000,000 *less* than the Moses route because of all of the land appropriation and demolition required by Moses' plan.⁴⁹ Despite the obvious wisdom of this alternate route, the East Tremonters' pleas fell on deaf ears.

Why was Moses so dead-set on his incredibly destructive route through East Tremont, when there was such a clear and relatively painless alternative? For starters, Moses saw the neighborhood

⁴⁵ Jonnes, *We're Still Here*, 120-121.

⁴⁶ Caro, *The Powerbroker*, 869.

⁴⁷ *Ibid*, 850.

⁴⁸ *Ibid*, 864.

⁴⁹ *Ibid*, 869.

as little more than a slum, much like those he was so accustomed to demolishing as chair of the Slum Clearance Committee. In press releases, Moses frequently referred to the apartment buildings in the neighborhoods as “tenements” and “walkups,” and “if those nouns didn’t seem to be eliciting the desired horror from his listeners, ‘slums.’”⁵⁰ Moses may well have viewed the construction of the Cross-Bronx Expressway as a way to continue his “urban renewal” work and therefore would want to choose the *most* destructive path, that which would require the demolition of the greatest number of these so-called slum tenements. Another possible component of Moses’ stubbornness here involves the Third Avenue Transit Company, whose main depot lay in the path of the East Tremonters’ proposed route. While in retrospect this issue may seem insubstantial, at the time, the Third Avenue Transit Company held tremendous sway in Bronx politics: “It was considered an open secret in Bronx political circles that key borough politicians held large but carefully hidden interests in Third Avenue Transit. And it is also a fact that, in Bronx politics of the period, what Third Avenue Transit wanted, Third Avenue Transit got.”⁵¹ Therefore Moses’ decision to keep the route as he originally proposed seems to have been a combination of personal zeal, an unwillingness to admit his faults, and political corruption.

Just as with Moses’ urban renewal/slum clearance projects, the demolition of East Tremont (as well as all other neighborhoods through which the Cross-Bronx Expressway runs) buildings was a messy and painful affair for residents. Moses immediately resorted to scare tactics to get the families out as fast as possible and sent each of them a letter stating that they had ninety days to move before their buildings would be torn down.⁵² In reality, this timeline was meaningless, as when those letters were sent out, “the money to build the East Tremont stretch of the expressway was nowhere in

⁵⁰ *Ibid*, 854.

⁵¹ Caro, *The Powerbroker*, 877-878.

⁵² *Ibid*, 859.

sight.”⁵³ Nevertheless, the city took over the 159 condemned buildings on January 1, 1954, and “almost simultaneously, the heat and hot water in many of the buildings was mysteriously cut off.”⁵⁴ Nor did Moses wait for a building to be completely empty of residents to begin demolition: says Lisa Edelstein, one of the East Tremont displaced residents, “As soon as the top floor of a building was empty, they’d start tearing off the roof and the top stories.”⁵⁵

To facilitate the relocation of the thousands of displaced East Tremont residents, Moses opened an office operated by the Nassau Management Company, which in theory would assist the residents in their search for new housing. This office, however, was not located in East Tremont and was difficult for East Tremonters to reach via public transit. On top of its inconvenient location, the office’s hours of operation were few and unpredictably varied, and when the office was open it was perpetually understaffed.⁵⁶ The Nassau Management Company “didn’t want to help you, they just wanted you out. And they wanted you out fast.’ ... A housewife was not offered any help in finding a new home. Instead, she was told that if Nassau Management had to find her one, she would receive only a hundred dollars for moving expenses, far less than would be needed to cover those expenses. If she found one herself, she was told, she would receive a hundred dollars for each room in her present apartment. If she found one *fast*, she was told, she would receive a flat “fee” of eight hundred dollars. And if she found one *real fast*, she would get not only eight hundred dollars but reimbursement for moving expenses – actual moving expenses. It was only if you refused to accept these incentives that you were given two cards, each bearing an address of an ‘available’ apartment – ‘comparable’ to the one you now occupied.”⁵⁷ Just as with his ill-fated slum-clearance projects, Robert Moses skirted the law and chose to completely ignore the needs of those residents he was

⁵³ *Ibid.*

⁵⁴ *Ibid.*, 880-881.

⁵⁵ *Ibid.*, 882.

⁵⁶ *Ibid.*, 879.

⁵⁷ *Ibid.*, 880-881.

displacing. Moses' neglect forced these residents to find whatever substandard housing they could afford elsewhere, and thus proliferated the problem of urban decay in the Bronx.

Demolition for and construction of the Cross-Bronx Expressway did not affect only those residents who were displaced. Construction threw the adjacent neighborhoods into a state of chaos, with "mountains of debris crawling with rats and roaches," and dust and grit from the demolition settling onto every available surface. The disruption also began attracting "vagrants and winos" to the area.⁵⁸ It did not take long for many of the perhaps 10,000 people living adjacent to the Expressway's excavation to flee the area along with the evicted residents. The profusion of newly vacated apartments were filled primarily with poor African Americans. Many East Tremont landlords, having long been frustrated by residents who never seemed to move out (thus preventing the landlords from raising rents), were eager to take advantage of this transformation, the opportunity to have new tenants whose poverty ensured a high turnover rate, and "whose lack of big-city sophistication [for many of the new African American tenants had recently migrated from the rural Deep South] made it easier for landlords to skimp on services."⁵⁹

Prior to the Expressway's construction, there had been a small African American (and Hispanic) population in East Tremont, but this influx had not caused any problems or inspired any fears among the more established, white East Tremont residents. After World War II, the migration of African Americans into East Tremont increased,⁶⁰ and immigration of Puerto Ricans began.⁶¹ By 1950, "there were approximately 11,000 nonwhites in East Tremont, 18 percent

⁵⁸ Jonnes, *We're Still Here*, 122-123.

⁵⁹ Caro, *The Powerbroker*, 888.

⁶⁰ African American migration to the north, particularly to major cities like New York City, began following the Civil War, with the NYC African American population doubling to ninety thousand (two percent of the overall NYC population) by 1890. One of the most popular destinations for African American migrants to New York City was Harlem, described by James Weldon (a black writer) in 1930: "Negro Harlem covers one of the most beautiful and healthful sites in the whole city. It is not a fringe, it is not a slum, nor is it a quarter consisting of dilapidated tenements. It is a section of new-law apartment houses and handsome dwellings, with streets as well-paved, as well-lighted, and as well-kept as any in the city." After World War II, the

of the neighborhood's 60,000 population," but because the flow was slow and steady, whites in the area were unconcerned.⁶² While in other parts of the city, the approach of African Americans and Puerto Ricans triggered "white flight,"⁶³ that was simply not the case in East Tremont, even as Morrisania, a neighborhood across Crotona Park from East Tremont, "had become a predominantly Negro slum by about 1930."⁶⁴ East Tremont's Jewish residents, many of them who had far left-wing political ideologies, "said they believed in the equality of men, including those with darker skins than they"⁶⁵ and felt no need to flee. Aside from their strong-held principles of equality, traditional East Tremonters did not flee because they simply could not afford to.⁶⁶

Once construction on the Cross-Bronx Expressway began in earnest, however, the few residents who *could* afford to move did so, hastening and spreading the urban decay with their exodus. With

"southern black diaspora began in earnest" as the mechanization of Southern cotton farms pushed African American unskilled workers out of jobs. The NYC African American population skyrocketed from 450,000 before WWII to 800,000 after it, causing "traditional black neighborhoods ... to burst at their seams." This, along with the simultaneous arrival of Puerto Rican immigrants, provided the seeds for developing housing crisis in the city. Jonnes, *We're Still Here*, 96-98.

⁶¹ Puerto Ricans began to migrate to the United States during the same period that African American migration from the South was surging. In 1917, the passing of the Jones Act made all Puerto Ricans US citizens, therefore making immigration (now technically migration for the Puerto Ricans) to the US very easy. Many of these migrants settled in East Harlem. The Great Depression and World War II temporarily halted Puerto Ricans migration, but migration swelled after WWII with the introduction of plane travel. Jonnes, *We're Still Here*, 98-99. From 1950-1956, "the net migration from Puerto Rico to New York City was more than 250,000 persons." Rosalind Tough and Gordon D. MacDonald, "Manhattan's Real Property Values and the Migrant Puerto Ricans," *Land Economics* 34, no. 1 (1958), 1. Puerto Rican migration caused the same crowding problems in neighborhoods like Spanish Harlem (as well as smaller neighborhoods in other boroughs like Mott Haven and Hunt's Point in the Bronx) that African Americans did in "Negro Harlem." Jonnes, *We're Still Here*, 102. Most of these new migrants arrived in the United States with very practically no money, "little knowledge of English, and few skills." Jonnes, *We're Still Here*, 100. Any skills that they did have prepared them only for low-paying jobs with little opportunity for advancement. Jonnes, *We're Still Here*, 102.

⁶² Caro, *The Powerbroker*, 857.

⁶³ The influx of Puerto Rican and African American migration to New York City inspired so-called "white flight," as white middle-income families fled the city to the suburbs. Tough and MacDonald, "Manhattan's Real Property Values," 12. Just as would happen in the near future in real estate along the Cross-Bronx Expressway, landlords of newly vacated apartments took the opportunity to hike up rents and skimp on services, putting African Americans and Puerto Ricans at a severe disadvantage in the housing market.

⁶⁴ Caro, *The Powerbroker*, 857.

⁶⁵ *Ibid*, 858.

⁶⁶ *Ibid*.

the resident overhaul, crime rates began to rise at an alarming speed, prompting even more residents to flee. While demolition for the Expressway initially expelled 5,000 of East Tremont's 60,000 residents, construction had now forced out 10,000 more.⁶⁷ Long-established East Tremont businesses, bereft of their once solid clientele base and subject to soaring insurance rates (due to increased break-ins), began to leave the neighborhood in droves as well.⁶⁸ By 1960, the one-mile segment of the Cross-Bronx that ran through East Tremont was complete; by 1965, the "very good, solid housing stock" on which East Tremonters had prided themselves were now "ravaged hulks, ... homes for welfare tenants and for the poorest of the working poor, for families that drift from one apartment to another without, seemingly, ever paying a month's rent in full."⁶⁹ East Tremont, along with all the other neighborhoods disrupted, was forever changed and irreparably damaged.

The Cross-Bronx Expressway did not only impact the Bronx's physical makeup and demographic, however; it also added tremendously to pollution in the area. The Expressway's six lanes were quickly filled with perpetual bumper-to-bumper traffic. This congestion, filling the air with carbon monoxide and other pollutants, would inevitably have repercussions for residents of the approximately 3,000 apartments with windows facing the Expressway and frequenters of the playgrounds that Moses built on "excess condemnation" parcels.⁷⁰ The problem is compounded by the fact that the Cross-Bronx Expressway is rarely flat, causing "the huge diesel tractor-trailers" that constitute a substantial percentage of the Expressway's overall traffic "to shift gears and inch their way up the hill, accelerator pedal jammed hard to the floor."⁷¹ The result is even more fumes filling Bronx residents' air supply. Because of the Cross-Bronx Expressway, today several Bronx

⁶⁷ *Ibid*, 890.

⁶⁸ *Ibid*.

⁶⁹ *Ibid*, 893.

⁷⁰ *Ibid*, 889.

⁷¹ Caro, *The Powerbroker*, 889.

neighborhoods “have some of the worst diesel pollution in New York City and the borough ranks third in the state of New York for health risks related to diesel soot.”⁷²

IV. Asthma in underprivileged areas/groups and the Bronx

Air pollution is one of the most frequently cited causes and/or exacerbating factors of asthma, and yet the connection between the two is complicated and murky, as “it is unlikely that air pollution alone is to blame for rising prevalence rates,”⁷³ and there are a vast array of types of air pollutants, each of which has a slightly different effect on asthma. Researchers base their connection between asthma and air pollution on data showing “that asthma, as measured by symptoms, hospitalization rates or hospital emergency department visits, is exacerbated when ambient concentrations of air pollutants increase.”⁷⁴ In the past decade, there have been several studies done on the effects different types of air pollutants have on lung function, the frequency of asthma attacks, and hospital admissions for asthma. These studies have reported a definite correlation between increased levels of air pollution and asthma.⁷⁵

⁷² “Hazardous to Our Health: The Human Impact of Port Truck Pollution on Truck Drivers and Residents in New York and New Jersey,” accessed August 13, 2011. http://healthyports.com/fileadmin/files_nynj/Hazardous_to_Our_Health.pdf.

⁷³ Zimmerman, “Asthma and Air Pollution,” 75.

⁷⁴ *Ibid.*

⁷⁵ In 1999, David Peden “conducted a review of the literature on exposures of asthmatics to air pollutants,” concluding that “exposure to increased levels of ambient air pollutants is associated with increases in asthma morbidity.” Zimmerman, “Asthma and Air Pollution,” 69. In 1997, Sunyer et al. “assessed the association between urban air pollution and emergency admissions for asthma during the years 1986-92 in Barcelona, Helsinki, Paris, and London” and concluded that “daily admissions for asthma in adults increased significantly with increasing ambient levels of nitrogen dioxide.” *Ibid.*, 71. In 1998, Anderson et al “investigated the relationship between daily hospital admissions for asthma and air pollution in London for the period 1987-92,” concluding that ozone was significantly associated with admissions in the 15-64 age group. Nitrogen dioxide with the 0-14 and 65+ groups, sulfur dioxide in the 0-14 age group, and black smoke in the 65+ age group.” *Ibid.*, 71.

Recently, diesel exhaust particles (DEP) have become a major focus of asthma research. DEP are miniscule in size (2.5 micrometers in diameter) and are thus “considered to be particularly dangerous to long-term human health because they are able to penetrate deep into the respiratory system and the lungs.”⁷⁶ According to the Environmental Protection Agency, fine airborne particles less than 2.5 micrometers in diameter, “a significant portion of which are produced by diesel engine emissions, lead to 15,000 premature deaths a year nationwide.”⁷⁷ Studies have found significant evidence supporting the theory that diesel exhaust particles are a serious exacerbating factor for asthma sufferers.⁷⁸ Findings from other studies suggest that not only are diesel particles able to travel further into the lungs than other airborne particles, they are also capable of carrying “allergens such as pollen deeper into the lungs” and “[amplifying] their aggravating effects.”⁷⁹ Trucks and buses, which constitute a large part of traffic on the Cross-Bronx Expressway, are a major source of diesel exhaust particles and therefore make the connection between diesel fumes and asthma exacerbation a serious concern for the Bronx.

Significant amounts of air pollution can negatively affect all people but particularly those who suffer from asthma, and there have been a number of studies documenting this link. These studies clearly demonstrate the adverse effects that air pollution has on asthmatics, showing that while airborne particles do not themselves *cause* asthma, they are still significant factors of existing asthma.⁸⁰

⁷⁶ *Ibid*, 67.

⁷⁷ Fernandez, “A Study Links Trucks’ Exhaust.”

⁷⁸ A University of California Los Angeles School of Medicine study led by Dr. Andrew Saxon “examined the relationship between asthma and diesel fuel” and “found that instilling allergens among individuals who are sensitive to them in the presence of diesel exhaust particles equivalent to concentrations found in the air in Los Angeles for a period of one to three days resulted in a five fold increase in total allergic protein level and a 50-fold increase in the number of reaction inducing allergic antibodies.” Zimmerman, “Asthma and Air Pollution,” 74.

⁷⁹ *Ibid*.

⁸⁰ In 1994, a team of researchers in Finland conducted a study of the effects of air pollution on children with asthmatic or cough symptoms, based on reports of asthmatic children having “lower lung function ... and a

Due to the well-established link between air pollution and asthma, it is not surprising that asthma is of particular concern to inner city residents, as a number of studies have shown.⁸¹ However, air pollution is but one of many factors that together result in these high asthma rates. Some factors are that “poor households have less access to medical care, are less able to afford the medications they need, and live in environments where asthma triggers are more likely to be found.”⁸² Dr. Emily Rosenbaum of Fordham University reported in her paper on “the role of housing and neighborhood environments” on asthma prevalence that “the odds of asthma prevalence rose with the number of maintenance deficiencies reported by householders, and were higher for households living nearby boarded-up buildings than for those living in areas free of [lacking in] physical activity.”⁸³ Other factors include “cockroaches, dust mites, molds, hair from pets, ... , pollen, tobacco smoke, stress, cold and dry air, metal vapors, paint, and others.”⁸⁴ A sedentary lifestyle in developed countries could also play a role. Children spend increasing amounts

larger prevalence of atopy and bronchial hyper-responsiveness.” They hypothesized that “adverse effects of short-term changes in air pollution on respiratory health would be stronger among asthmatic children than among children with cough as their only respiratory symptom.” Kirsi Liisa Timonen and Juha Pekkanen, “Air Pollution and Respiratory Health Among Children with Asthmatic or Cough Symptoms,” *American Journal of Respiratory Critical Care Medicine* 156 (1997), 546. The team’s findings supported their hypothesis, and they concluded that air pollution has greater adverse effects on asthma sufferers than it does on people with normal lung function. *Ibid*, 551. In 2002, Desqueyroux et al “carried out a study of the association between air pollution and asthma among people with severe asthma,” the results of which suggest “an association between asthma attacks and ambient levels of PM10 [particulate matter] and O3 [ozone].” Zimmerman, “Asthma and Air Pollution,” 72. In 2008, a study led by Dr. Isabelle Romieu of the Instituto Nacional de Salud Publica in Mexico City “correlated pollutants associated with exacerbation of respiratory symptoms in asthmatic children.... In asthmatic children, coughing, wheezing and medicine usage was associated with increased levels of atmospheric pollutants. In healthy volunteers, increased coughing was only seen with higher levels of nitrogen dioxide. Children living in areas with high levels of traffic more often experienced worsening of asthma symptoms and greater use of medication. Small buses for public transport running on petrol/natural gas, and larger buses and trucks running on diesel, were more strongly associated with worsening of symptoms.” “Traffic Pollution Worsens Symptoms in Asthmatic Children,” *Science Daily*, November 17, 2008, accessed August 2, 2011.

⁸¹ Floyd J. Malveaux and Sheryl A. Fletcher-Vincent. “Environmental Risk Factors of Childhood Asthma in Urban Centers.” *Environmental Health Perspectives* 103, no. 6 (1995): 59.

⁸² Zimmerman, “Asthma and Air Pollution,” 63.

⁸³ Emily Rosenbaum, “Racial/Ethnic Differences in Asthma Prevalence: The Role of Housing and Neighborhood Environments,” *Journal of Health and Social Behavior* 49, no. 2 (2008): 141.

⁸⁴ Zimmerman, “Asthma and Air Pollution,” 65.

of their time indoors, where they not only miss out on important exercise but also experience heightened exposure to “indoor allergens like dust mites, cockroaches, and cigarette smoke,”⁸⁵ allergens which are of greater prevalence in poor urban areas. Another possible factor is genetic predisposition to asthma, which “appears to vary by ethnic group.” This could help explain why African Americans and Hispanics have disproportionately high asthma rates compared to whites in the United States⁸⁶ – while only 3.3% of non-Hispanic whites aged 6 months to 11 years suffer from asthma, Puerto Ricans report 11.2% and African Americans 5.9%.⁸⁷ But as with other factors, while genetics may play an exacerbating factor, asthma prevalence is increasing at too great a rate to be explained by genetics alone.

⁸⁵ *Ibid*, 66.

⁸⁶ In addition to external influences on African American and Puerto Rican asthma rates, recently genetics have been identified as a possible contributor. A recently published University of Chicago study, analyzed data from nine other research groups “looking for genes associated with asthma among ethnically diverse North American populations,” including European Americans, African Americans, African Caribbeans, and Latinos. The study confirmed the existence of a genetic variant, located in the PYHIN gene, which “is part of a family of genes linked with the body’s response to viral infections.” This newly discovered variant was found only in study participants of African American and African Caribbean descent. While the University of Chicago team made clear that the gene variant on its own would play “only a small role in increasing asthma risk, but that risk could be multiplied when combined with other risk genes and with environmental factors, such as smoking that also increase asthma risk.” Julie Steenhuisen, “Discovery May Explain Higher Asthma Rates in Blacks,” *Msnbc.com*, August 1, 2011, accessed August 10, 2011.

The possibility of a Puerto Rican genetic susceptibility to asthma is not as tangible as that of African Americans (as discovered in the University of Chicago study), the fact that Puerto Ricans in Puerto Rico (as opposed to those who have migrated to the United States) suffer inordinately from asthma just as do their brethren in the US suggests a similar link. Puerto Rico “has one of the highest asthma prevalence rates in the world.... Children [in Puerto Rico] are nearly 300% more likely to have [asthma] than white non-Hispanic children in the continental US.” According to the US Centers for Disease Control and Prevention, Puerto Rico, with a population of four million, has two and a half times as many asthma-related deaths as does the mainland United States. Says Dr. Floyd Malveaux of the College of Medicine at Harvard University, “Nearly 30 percent of children in Puerto Rico are diagnosed with asthma, and the rate increases to 40 percent among kids in public housing.” In addition to experiencing higher-than-average asthma rates, Puerto Ricans do not respond as well as other ethnic groups to Albuteral, the most frequently prescribed asthma medication. While countless researchers have taken note of the problem, as of yet none of them have been able to uncover the cause of Puerto Ricans’ high asthma rates. Danica Coto, “Puerto Rico Baffled by High Asthma Rate,” *Msnbc.com*, December 27, 2010, accessed August 10, 2011.

⁸⁷ Zimerman, “Asthma and Air Pollution,” 66.

The fact that African Americans and Puerto Ricans have such high rates of asthma has serious implications for Bronx asthma rates, as those two groups constitute an overwhelming majority of the Bronx's population. This problem is further complicated by the poor housing quality suffered by Puerto Ricans and African Americans in the Bronx: "In New York City, blacks and Hispanics are ... more likely to occupy housing units that suffer from numerous structural and maintenance deficiencies, such as interior and exterior leaks, chipping paint and broken plaster, holes in the floors and walls, and pest infestation."⁸⁸ As previously established, such inadequate housing conditions can be a major exacerbating factor of asthma.

Pediatric asthma is a serious problem in the United States. As of 2002, asthma is the "number one reason children are admitted to hospitals and the number one cause of school absenteeism."⁸⁹ As previously noted, asthma is most prevalent in poor urban communities, like the Bronx, which reports some of the highest asthma rates in the country and *the* highest pediatric asthma hospitalization rates in New York.⁹⁰ In the Bronx, asthma mortality rates are "about three times higher ... than the national average. Hospitalization rates are about five times higher. In some neighborhoods in the Bronx it is estimated that 20% of the children have asthma."⁹¹ A 2001-2004 study on "modifiable risk factors for asthma morbidity in [the] Bronx versus other inner-city children" reported that "in a school-based sample, 15.5% of 4-5 year-old Bronx children were identified as having asthma compared with 9.2% of New York City students overall and 8.9% of US children 2-17 years of age."⁹² For Bronx children under age fourteen, the asthma hospitalization rate

⁸⁸ Rosenbaum, "Racial/Ethnic Differences in Asthma Prevalence," 132.

⁸⁹ Zimmerman, "Asthma and Air Pollution," 63.

⁹⁰ *Ibid.*, 64.

⁹¹ *Ibid.*

⁹² Karen Warman, Ellen Johnson Silver, and Pam R. Wood, "Modifiable Risk Factors for Asthma Morbidity in Bronx Versus Other Inner-City Children." *Journal of Asthma* 46, no. 10 (2009), 995.

is 9.3 per 1000 children.⁹³ These exceptionally high asthma rates in the Bronx have been traced to a number of factors, including “a high concentration of traffic in a densely populated area; poorly maintained housing in impoverished neighborhoods; a lack of access to medical care and a large population of blacks and Hispanics, two groups with high rates of asthma,” says Dr. A. Hal Strelnick, a professor of family and social medicine at the Albert Einstein College of Medicine in the Bronx.⁹⁴ A study published in 2009 found that in light of these seemingly endless contributing factors to asthma, 45.1% of Bronx parents reported that they “felt that they had little control over their child’s asthma” and 41.7% “felt helpless in dealing with asthma.”⁹⁵ Bronx parents’ pessimistic attitudes about their children’s asthma both result from and further compound the problem of pediatric asthma in the borough.

Another source of the diesel traffic in the Bronx are the many diesel trucks transporting waste from the Bronx’s various waste transfer stations.⁹⁶ The connection between the high levels of diesel exhaust pollution in the Bronx and the area’s soaring pediatric asthma rates has recently finally become a public issue, demonstrated in 2002 by New York City Mayor Michael Bloomberg saying: “Our kids are coming down with asthma at an alarming rate. The air is being polluted by these trucks.”⁹⁷

In 2006, a New York University research team conducted a study monitoring Bronx schoolchildren’s daily exposure to air pollution. The team selected ten children from each of four Bronx public schools (PS 154, MS 302, MS 201 and Community School 152), and gave each child a wheeled backpack with “a battery-powered pump and air filter, along with other instruments.”⁹⁸

⁹³ Fernandez, “Study Links Trucks’ Exhaust.”

⁹⁴ *Ibid.*

⁹⁵ Warman, Silver, and Wood, “Modifiable Risk Factors,” 1000.

⁹⁶ Zimmerman, “Asthma and Air Pollution,” 67.

⁹⁷ Zimmerman, “Asthma and Air Pollution,” 73.

⁹⁸ Fernandez, “Study Links Trucks’ Exhaust.”

During the month that each participant took part in the study, researchers regularly tested their lung function and analyzed the filters in their backpacks.⁹⁹ While Dr. Thurston, a member of the NYU research team, explained that diesel exhaust constituted only about five to ten percent of the overall fine particle pollution found by the study, “it was that portion that seems to be having the worst effect on the children’s asthma.... Their symptoms, like wheezing, doubled on days when pollution from truck traffic was highest.”¹⁰⁰ There are four expressways (the Cross-Bronx, Major Deegan, Bruckner and Sheridan) that traverse the South Bronx, and the study also found that “about one-fifth of all students from pre-kindergarten to eighth grade in the area go to schools located within 500 feet, or about two blocks, from major highways.”¹⁰¹ In other words, children living in the South Bronx are “twice as likely to attend a school near a highway as [are] children in other parts of the city.”¹⁰²

V. Playgrounds built alongside the Cross-Bronx Expressway

While Robert Moses is most famous for his roads, along with the Cross-Bronx Expressway Moses also built many playgrounds on the Cross-Bronx Expressway’s overpasses or in close proximity to the road. To Moses, these playgrounds may have seemed a way for him to soften the blow of the construction’s overall effects, but these playgrounds sit in the midst of massive amounts of diesel exhaust and other fuel emissions. These playgrounds were constructed on land left over from the land that Moses and the city had appropriated for the Cross-Bronx Expressway. Consequently, these playgrounds are on the whole very small. Of the fourteen playgrounds Moses

⁹⁹ *Ibid.*

¹⁰⁰ *Ibid.*

¹⁰¹ *Ibid.*

¹⁰² *Ibid.*

built along the Cross-Bronx Expressway (not counting the tiny swaths of greenspace), only five are larger than one acre.

In the wider discussion on health inequalities, it is widely accepted that the environment in which a person lives and/or works has a large effect on that person's overall health. A poor environment, therefore, can have very detrimental effects on residents' health. Along the same line, a good or "healthy" environment can have very positive effects on residents' health. There is a well-established link between the availability of green space (like playgrounds and parks) in a neighborhood and improved health among its residents. The idea that the shared health characteristics of a particular community could be linked to their neighborhood environment emerged in the early 1990s, when, frustrated by the focus of research up until that point on health characteristics of individuals in a population, researchers involved in this new debate were looking for area-level explanations for health inequality. Since its introduction, the contextual approach to health inequalities has increasingly incorporated health and urban policy and tried to implement health-promoting resources into neighborhoods so as to improve residents' health.

During my research, I visited seven of the playgrounds designed by Moses along the Cross-Bronx Expressway: Admiral Farragut Playground, Prospect Playground, Fairmount Playground, Jennie Jerome Playground, Morris Mesa, Virginia Playground, and Hugh J. Grant Circle. To conduct my research, I began by going to the New York City Department of Parks and Recreation website and using its mapping features to discern which Bronx playgrounds are directly along the Cross-Bronx Expressway. Then, I looked up those specific playgrounds on the same website to see which ones were built in conjunction with the Expressway. After compiling my list, I began visiting the playgrounds, getting a first-hand look at the areas' proximity to the Expressway and what each had in terms of facilities; during these visits, I also spoke with parents about their awareness of the problem of pediatric asthma in the Bronx, how often they visited the specific playground, whether

they were satisfied with the playground overall and whether they had any concerns about the playground's proximity to a major expressway.

All of these playgrounds that I visited looked more or less the same: concrete or asphalt on the ground, sparse trees, benches, and jungle gyms. A few had water sprinklers for children to play in, and the comparatively larger playgrounds had basketball courts and baseball diamonds, also on the asphalt. Most importantly, these playgrounds are on the whole very small, and most of them directly border the Cross-Bronx Expressway (if they are not immediately adjacent to the Expressway, they are across the street from it). These playgrounds fail to meet the standard of optimal green spaces on a number of counts. In traditional urban planning, open spaces, parks, and playgrounds are viewed as unmitigated “boons conferred on the deprived populations of cities ... venerated in an amazingly uncritical fashion.”¹⁰³ According to these views, parks and playgrounds, regardless of their amenities, size, or location, are unquestionably good things for a community. Undoubtedly, it was this widely held attitude that Robert Moses hoped to capitalize on when he built the playgrounds on excess appropriated land alongside the Cross-Bronx Expressway. As he had begun his career in building and promoting parks, Moses knew the political power that parks could wield, and so perhaps he used these playgrounds to soften the negative image of his Expressway. Indeed, Moses had used this strategy before in his many public housing projects: a *New York Times* article from January 1961 said, “Mr. Moses concluded that some new housing might be ‘ugly, regimented, institutional, identical, conformed, faceless.’ But he suggested that such housing could be surrounded with parks.”¹⁰⁴ Here, as with the Cross-Bronx playgrounds, green space was proposed as a magical cure-all for the ills that Moses himself was the cause of. Unfortunately, but perhaps not surprisingly, these playgrounds fail to meet the standard of optimal green spaces on a number of counts and have perhaps done more

¹⁰³ Jane Jacobs, *The Death and Life of Great American Cities* (New York: Random House, 1961), 89-90.

¹⁰⁴ Jacobs, *The Death and Life of Great American Cities*, 90.

harm than good to their communities. These playgrounds' small size in part accounts for their failure. Among city planners, there is the "science-fiction nonsense that parks are 'the lungs of the city,'" when in reality it takes about three acres of woods to absorb as much carbon dioxide as four people exude in breathing, cooking and heating."¹⁰⁵ Only one of the Cross-Bronx Expressway playgrounds is larger than three acres (Noble Playground, at 3.21 acres), but that playground fails along with the rest because it is of course mostly asphalt rather than actually filled with trees. The lack of adequate green space in the Bronx, as prevented in part by the Cross-Bronx Expressway and the borough's other nine major traffic roads, is an exacerbating factor in the Bronx's pediatric asthma problem.

Residents I interviewed at Admiral Farragut Playground, which is in very close proximity to Crotona Park, the Bronx equivalent of Manhattan's Central Park, claimed a strong preference for Crotona Park over Admiral Farragut Playground. These residents explained their preference by describing the various advantages of Crotona Park to Admiral Farragut Playground: Crotona has "more open space" and "more activities"; it was also "cleaner" and "not concrete." One resident said, "People in this neighborhood [the area surrounding Crotona Park] are lucky because they have more choices for parks." He speculated that people living down East 176th Street, away from Crotona Park, would have more problems with asthma because they lacked the resource of a large park like Crotona. Residents I interviewed at Prospect Playground, also near Crotona Park, reported a similar preference for the larger park. One resident there described Crotona Park as "friendlier and larger."

I had expected many of the parents I encountered to be aware of the issue of pediatric asthma in the Bronx, but while some of them were, many had very little or even no knowledge on the subject. A mother with whom I spoke at Prospect Playground was by far the most informed and concerned

¹⁰⁵ *Ibid*, 91.

of everyone I interviewed about the issue – not only was she well-informed of the problem and its causes and exacerbating factors, she estimated that she personally knew more than twenty children who suffered from asthma. When asked what she thought about the playground being so close to a major expressway, she volunteered that she was very concerned about fumes from the Expressway, and that the Expressway’s proximity was an issue among parents.

Yet no one else I interviewed had nearly the awareness or concern about the issue of pediatric asthma as did the mother at Prospect Playground. Many of those I interviewed had no awareness of the enormity of pediatric asthma’s prevalence in the Bronx, and the few who did had little or no concern about the proximity of the playground, to which they had brought their children, to the Cross-Bronx Expressway. In some cases, the possibility that a major expressway could have serious health implications for themselves and their children had simply never occurred to parents. At Morris Mesa, I spoke with a woman who was aware of the asthma problem in the Bronx, as both her son and brother suffer from asthma, and she cited the usual causes of asthma with ease. Despite this basic knowledge of the issue, the proximity of the Expressway had not at all occurred to her prior to my mentioning it. Those parents who did express concern over the Expressway’s location were worried mainly for the physical safety of their children, rather than the effects of exhaust fumes. For example, one man at Jennie Jerome Playground claimed to be unaware of the Bronx’s asthma rates, even though both his nephew and sister-in-law both have very bad asthma. While the man didn’t like the playground’s proximity to the Expressway, his main concern was the physical safety of his children, not the fumes. At Virginia Playground, I interviewed a woman who claimed to be aware of the asthma problem “from the news”; in addition, her son has asthma and she knows “a few more.” Despite her first-hand experience with asthma, she knew little about the causes of asthma. She also had no issue with the Cross-Bronx Expressway’s location, saying that it was “not an issue for parents who pay attention to their kids” (i.e. that the expressway had potential for

physical harm only). When asked about the fumes from the expressway, she said she didn't "think they'd cause any problems." Another woman I interviewed at Morris Mesa was concerned about the Expressway's location only insofar that she thought it brought rats to the playground.

Other parents had no concerns about the Cross-Bronx Expressway's proximity at all. A woman I interviewed at Jennie Jerome Playground claimed to be "aware of the high asthma rates," and said that she, her five children, and four of her grandchildren all have asthma (she raised her children in the area). Nevertheless, she said that she was "satisfied" with the playground's amenities and with its location and was "not concerned with the proximity to the Cross-Bronx." Another woman I spoke with at Jennie Jerome Playground told me that her son and cousin have asthma, and that they live in the area and visit this playground weekly. Overall, she purported to be satisfied with the playground, and "not concerned about the fumes" – she also had "no idea about the causes of asthma." A woman I interviewed at Morris Mesa expressed similar views: she was "aware of the issue," and her son and brother have asthma, but she did not see the playground's proximity to the Cross-Bronx as at all problematic.

After completing my visits to these Cross-Bronx playgrounds, I went back to the NYC Department of Parks and Recreation website and went through the lists of playgrounds in all five boroughs, seeing how many playgrounds are in each borough, how many acres these playgrounds are, and how many of the playgrounds are on or very near a major road (expressway, parkway, major avenue, etc). To demonstrate how the placement of expressways and playgrounds in a given area is influenced by that area's overall class status, I will compare playgrounds in the Bronx and Staten Island, the boroughs with the highest and lowest asthma rates as well as the lowest and highest median income (respectively).

The Bronx has 167 parks/playgrounds. Forty-six are on or near a major thoroughfare, and fourteen are on/near the Cross-Bronx Expressway. Of these fourteen playgrounds adjacent to the

Cross-Bronx Expressway, only five are larger than one acre – the smallest, Peace Park, is 0.14 acres, and the largest, Noble Playground, is 3.21 acres. Only 17 of the Bronx’s 167 parks/playgrounds are larger than three acres, and only three are larger than one hundred acres.¹⁰⁶ Staten Island has fifty-seven parks/playgrounds. Three of these are on or near a major road (and one of these is 138 acres, minimizing the danger posed by the road). Eight of the fifty-seven parks/playgrounds are smaller than one acre, while five are larger than one hundred acres (four of those five are larger than 200 acres, and one is larger than 600 acres).¹⁰⁷ According to the United States Census Bureau, the Bronx is forty-two square miles in size, and has a population of 1,385,108 people. Staten Island is fifty-eight square miles in size, and has a population of 468,730 people.¹⁰⁸ It is also worth noting that the Bronx has ten major roads (the Bruckner Expressway, the Major Deegan Expressway, the Sheridan Expressway, the Throgs Neck Expressway, the Cross-Bronx Expressway, the Bronx River Parkway, the Hutchinson River Parkway, the Pelham Parkway, the Mosholu Parkway, and the Grand Concourse), while Staten Island has only four (the Martin Luther King Jr. Expressway, the Staten Island Expressway, the West Shore Expressway, and the Richmond Parkway).

From 2007-2008, asthma-related emergency department visits for ages 0-14 years was 42.1% in the Bronx, and 9% in Staten Island.¹⁰⁹ The Bronx and Staten Island also have the largest income gap of the five boroughs: according to the Federal Reserve Bank of New York, in 2005 the median household income in the Bronx was \$29,000 and \$63,000 in Staten Island.¹¹⁰ The stark divide between the characteristics of the parks and playgrounds in the Bronx and Staten Island is startling,

¹⁰⁶ “Playgrounds,” accessed August 3, 2011, <http://www.nycgovparks.org/facilities/playgrounds/>.

¹⁰⁷ *Ibid.*

¹⁰⁸ “County and City Data Book: 2007, Table B-1, Area and Population,” accessed October 17, 2011, <http://www.census.gov/statab/cdb/ccdbstcounty.html>.

¹⁰⁹ “2005-2008 Asthma Emergency Department (ED) Visits Tables and Figures,” New York City Department of Health and Mental Hygiene, accessed August 11, 2011, <http://www.nyc.gov/html/doh/html/asthma/asthma2.shtml>.

¹¹⁰ “District Profile: New York City,” Federal Reserve Bank of New York, accessed 12 November 2011, http://www.ny.frb.org/regional/profile_nyc.html.

and the fact that these two boroughs have the greatest difference out of all five of New York City's boroughs in parks and playgrounds (the amount, size, and location in each borough), as well as the largest gap in asthma rates and median household income, strongly suggests that these facts are all connected and not at all accidental.

VI. Argument

Since the beginning of its construction in 1948, the Cross-Bronx Expressway has had an acutely detrimental effect on the Bronx, to the extent that it is partially responsible even for the borough's exorbitantly high rates of pediatric asthma. In planning and building the Cross-Bronx, Robert Moses implemented many techniques and policies that the United States government had pioneered in organizations like the Home Owners Loan Corporation and Federal Housing Authority that Moses had become accustomed to using while head of the New York City Slum Clearance Committee. These policies, encouraging careless and irresponsible treatment of the Bronx and its residents, have compounded the Bronx's asthma problem.

As head of the New York City Slum Clearance Committee, Robert Moses decided that the best way to combat the growth of slums and to facilitate "urban renewal" was to entirely demolish existing slums, pushing residents elsewhere, and therefore actually augmenting the city's slum problem. The rating policies devised by the Home Owners Loan Corporation and perfected by the Federal Housing Authority dictated more or less exactly what kind of people would and should be ousted from their homes: minorities. In New York City in the mid-twentieth century, the two largest minority ethnic groups were African Americans and Puerto Ricans, and they were targeted by slum clearance policies. Because the HOLC and FHA systematically assigned heterogeneous neighborhoods failing grades, financial institutions steered clear, hastening the areas' decline. The perceptions and actions of financial institutions were a self-fulfilling prophecy. Soon, financial

institutions could predict what the HOLC or FHA would rate an area with reasonably accuracy – all they needed to do was see who was living in that area. If the residents were of an ethnic minority, lenders could rationally assume that the neighborhood would receive an undesirable grade and that they should keep their money out. It did not take long for even a small ethnic minority contingent to label a neighborhood a slum, and financial institutions' subsequent actions caused their fears to become reality.

In his urban renewal endeavors, Moses followed these procedures specifically targeting poor ethnic neighborhoods, like the ones razed for his Manhattantown project. These government-sanctioned practices carried over into Moses' plan for the Cross-Bronx Expressway, where he not only facilitated the growth and creation of new slums by forcing poor residents from their homes without providing them with suitable and affordable new housing, but also created a slum neighborhood where there had been none. While Moses did not specifically target racial minorities with the Cross-Bronx Expressway, the residents he did target were only marginally economically better off than poor African Americans and Puerto Ricans. More importantly, Moses created a new haven for all of those poor minority refugees that his slum clearance projects in Manhattan had created. Slapping a huge expressway in the middle of communities, tearing down half of them just to make room for it, Moses degraded the housing quality and property values of these communities. In the end, only the poorest of the original residents remained, joined by thousands of even poorer African Americans and Puerto Ricans. HOLC and FHA red-lining practices were still widely used, meaning that the Cross-Bronx Expressway's actual construction was only the beginning of the Bronx's suffering. Now physically and demographically undesirable, the areas joined the ranks of the red-lined. Denied outside investment and with it any hope of regeneration, these neighborhoods continued to decline at a rapid rate.

The very fact that Robert Moses chose the Bronx as the location for his new expressway was perhaps preordained by HOLC and FHA practices. In the Bronx, Moses saw a cluster of poor neighborhoods filled with people who held absolutely no political clout and were therefore unable to offer any serious opposition to his plans. And he was right: although East Tremont residents organized and fought Moses' proposal as hard as they could, that was nowhere near hard enough. Moses had all the powers in the city backing him up, and the poor Jewish housewives of East Tremont had nothing. The Cross-Bronx Expressway phenomenon was not an isolated incident, either, since today there are ten such roadways in the Bronx. New York City policymakers and officials tended to avoid building major roads in central and affluent areas like Manhattan. When they did build expressways or parkways in Manhattan, it was always along the rivers where it would cause little to no damage (like Robert Moses' Henry Hudson Parkway which runs along the Hudson River and Riverside Park in Manhattan).

The one time that Moses *did* try to build a parkway in a central area of Manhattan, he was stopped dead in his tracks. In 1941, Robert Moses proposed the Lower Manhattan Expressway, which was to connect the Manhattan and Williamsburg bridges and the Holland Tunnel. Moses "recommended that construction of the road be expedited not only to relieve congestion, but also to serve defense functions."¹¹¹ Moses' initial proposal was pushed to the side, and he re-introduced it in the early 1960s. Had it been approved, the Lower Manhattan Expressway would have required the demolition of several historic buildings and would have displaced an estimated 1,972 families and 804 businesses.¹¹² Just like East Tremont residents, members of the affected community, led by Jane Jacobs, community activist and critic of contemporary urban renewal policies, organized to fight the expressway – the organization's official name was the Joint Committee to Stop the Lower

¹¹¹ "Lower Manhattan Expressway," accessed November 3, 2011, <http://www.nycroads.com/roads/lower-manhattan/>.

¹¹² *Ibid.*

Manhattan Expressway, with Jacobs as its chairman. Despite having no professional training in city planning, Jacobs became involved in urban activism in the 1960s, focusing her efforts on opposing Robert Moses' "top-down neighborhood clearing and highway building."¹¹³ Unlike the residents of East Tremont, Jane Jacobs' group was resoundingly successful. Moses' plans for the Lower Manhattan Expressway were shut down. Jacobs' successful defeat of Moses was a turning point in New York City urban planning and "invigorated community-based urban activism and helped end Parks Commissioner Robert Moses' reign of power."¹¹⁴ Other communities, like the Bronx, poorer and far less powerful than Greenwich Village, did not fare so well. Robert Moses made a habit of steamrolling over community dissent, convinced that he, not they, knew what was best for them. And in poor boroughs like the Bronx, Moses' tactic was immensely successful, resulting in Moses and contemporary policymakers dumping many of their harmful policies and an unreasonable number of highways and expressways there.

Fused with the tremendous pollution brought by the Cross-Bronx Expressway, the demographic overhaul promoted by Robert Moses' use of biased HOLC and FHA practices created one of the most powerful components of the Bronx's current asthma predicament. Across the board, African Americans and Puerto Ricans have some of the highest asthma rates of any ethnic groups. While these sorts of genetic predisposition claims are tenuous, the fact remains that African Americans and Puerto Ricans suffer inordinately from asthma. The poor housing conditions that African Americans and Puerto Ricans inhabit in the Bronx as a result of the Cross-Bronx Expressway is another contributing factor to the area's high asthma rates. With long-established tenants leaving in droves, Bronx landlords capitalized on the opportunity to increase rents and skimp on services, as the new tenants (poor African Americans and Puerto Ricans) lacked the knowledge and resources to do

¹¹³ "Jane Jacobs," Project for Public Spaces, accessed November 13, 2011, <http://www.pps.org/articles/jjacobs-2/>

¹¹⁴ *Ibid.*

anything about it. Over time, this landlord neglect has created hot spots of asthma exacerbation (rodents, cockroaches, mold, etc.) that have intensified asthma prevalence in the Bronx.

In addition, the Cross-Bronx has inundated the Bronx with massive amounts of traffic, and with it staggering levels of air pollutants, which has been proved in several studies to severely exacerbate asthma symptoms. Diesel exhaust particles are an admittedly small but disproportionately influential component of the Cross-Bronx Expressway's overall air pollution, having been shown to be the worst type of air particle pollution for asthmatics.

Perhaps to soften the Cross-Bronx Expressway's overall blow to Bronx residents, Robert Moses used excess appropriated land to built tiny playgrounds and green spaces alongside the Expressway. Throughout his entire career, Moses was a master of public relations, especially when it came to parks – one of his mantras was that when you were on the side of parks, you were on the side of the angels. He used this reasoning to justify using very questionable methods in bringing several major parks to fruition, including Jones Beach State Park on Long Island Through masterminding so many of these large parks, Moses accrued a very impressive reputation. Well aware of this, it is extremely likely that Moses wanted to extend the good feelings people had for his parks to his expressways, particularly the Cross-Bronx, and what better way than to attach playgrounds to it? The central point here, however, is that Moses did not build the playgrounds specifically to benefit Bronx residents – if any benefit to them was mentioned, it would have been a mere afterthought. Had Moses built the playgrounds to benefit actual Bronx residents, he could have tried to make them larger. Had Moses had Bronx residents' best interests at heart, he might not have built those playgrounds alongside a major expressway at all.

The story of the Cross-Bronx Expressway is a cautionary tale to public policy makers and elected officials everywhere. Throughout the whole process – every step along the way, even down to the tiny playgrounds – *no one was thinking*. Everyone involved believed that they were creating new

urban centers that would benefit everyone, even if a certain group of people failed to recognize that at the time (like the East Tremont residents). As Jane Jacobs describes in her book *The Death and Life of Great American Cities*, Robert Moses “made an art of using control of public money to get his way with those whom the voters elect and depend on to represent their frequently opposing interests.”¹¹⁵ Moses and his cohorts saw themselves as doing a great service to the city and its residents but did not stop for a second to think about the possible ramifications or to listen to community input and assumed that they, as powerful and educated white men, instinctively knew what was best for these communities. As with the East Tremont dissenters, Moses and his aides refused to listen to their arguments at all. When the Cross-Bronx Expressway was built, New York had no requirement for community input as it does now, in the form of community boards. Today, there are fifty-nine community boards throughout New York City, each made up of fifty unpaid members chosen by the borough presidents “from among active, involved people of each community and must reside, work, or have some other significant interest in the community.”¹¹⁶ While community boards serve simply an advisory role and “do not have the ability to order any City agent or official to perform any task, ... boards are usually successful in resolving the problems they address.”¹¹⁷ Had these boards been around when the Cross-Bronx was built, Moses would have been required to present his project to them, and while they would have had no real power to stop him, their mere existence would have forced Moses to listen to the people whom his project was actually going to affect. The Cross-Bronx Expressway fiasco is a prime example of government bureaucracy run amok, with removed policymakers and officials ignoring the people they are meant to serve.

¹¹⁵ Jacobs, *The Death and Life of Great American Cities*, 131.

¹¹⁶ “About Your Community Boards,” accessed November 3, 2011, <http://www.nyc.gov/html/cau/html/cb/about.shtml>.

¹¹⁷ *Ibid.*

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