



University Transportation Research Center - Region 2

Final Report



The Politics of Large Infrastructure Investment Decision-Making: The Case of the Second Avenue Subway

Performing Organization: The City College of New York, CUNY



November 2013



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The Region 2 University Transportation Research Center (UTRC) is one of ten original University Transportation Centers established in 1987 by the U.S. Congress. These Centers were established with the recognition that transportation plays a key role in the nation's economy and the quality of life of its citizens. University faculty members provide a critical link in resolving our national and regional transportation problems while training the professionals who address our transportation systems and their customers on a daily basis.

The UTRC was established in order to support research, education and the transfer of technology in the field of transportation. The theme of the Center is "Planning and Managing Regional Transportation Systems in a Changing World." Presently, under the direction of Dr. Camille Kamga, the UTRC represents USDOT Region II, including New York, New Jersey, Puerto Rico and the U.S. Virgin Islands. Functioning as a consortium of twelve major Universities throughout the region, UTRC is located at the CUNY Institute for Transportation Systems at The City College of New York, the lead institution of the consortium. The Center, through its consortium, an Agency-Industry Council and its Director and Staff, supports research, education, and technology transfer under its theme. UTRC's three main goals are:

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16. Abstract Over the past few decades, urbanization and economic growth have intensified the need for more efficient urban and regional transportation, including the expansion and reorganization of existing transportation networks. Given such huge investments and severe constraints on resources such as financial and land, infrastructure projects require a careful prioritization and selection among available alternatives. In reality, project selection appears to be determined as much by politics as by transport-economic considerations. This paper traces the politics of megaproject decision-making of the Second Avenue Subway (SAS), a subway project in New York. The project's first stage is currently being built after nearly 100 years of effort. In particular, we examine whether project-related decisions were the results of power struggles between the involved actors, and less the results of transportation planning concerns. We argue that the re-organization of transportation institutions, specifically the formation of the Metropolitan Transportation Agency (MTA), enabled the selection and implementation of SAS. While transportation agencies are bound by the legal and bureaucratic rules set by those who create them, they have their own agendas and are crucial for project selection. If successful, as in the case of the Second Avenue Subway, they can establish political momentum against political and fiscal adversity. Against the background of this project long planning and failure history, we find that besides the creation of the MTA, the following factors contributed to project eventual success: 1) the long project history bestowed a "legendary" character upon the project; 2) a "window of opportunity" opened up for inner-city projects after September 11; 3) a strong set of project champions advanced the project; and 4) the nature of funding arrangements was instrumental in this project success.					
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Final Report for UTRC Minigrant Award 2011

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Patrizia Nobbe and Joseph Berechman

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¹ This case study is part of a larger research effort – a dissertation on the politics of transportation megaproject decision-making (by Patrizia Nobbe). The dissertation contains 1) a statistical analysis of international transportation megaprojects, and 2) two case studies, illuminating certain aspects of the subject in more detail. This paper is based on one of these cases.

List of Acronyms

BOT - Board of Transportation

CPRB - Capital Program Review Board

El - Elevated Line

EIS - Environmental Impact Statement

FTA - Federal Transit Administration

IND - Independent System

MESA - Manhattan East Side Transit Alternatives Study

MIS - Major Investment Study

MTA - Metropolitan Transportation Authority

MTACC - Metropolitan Transportation Authority Capital Construction

NYC - New York City

NYCT - New York City Transit

RPA - Regional Planning Association

TA - Transit Authority (also: NYCT)

1. Introduction

Over the past few decades, urbanization and economic growth have intensified the need for more efficient transportation, including the expansion and reorganization of existing transportation networks – particularly in metropolitan areas. Given such huge investments, infrastructure projects require a careful prioritization and selection among available alternatives, and their implementation is subject to budgetary and other significant resource (e.g., land) constraints.

Project selection seems to be informed as much by politics as by transport-economic considerations. Since there is often more than one solution to any given transportation problem, battles over which solution to implement (or none at all) are commonplace. They might be over project alternatives, funding sources, over project authority, or even over the social ends of transportation investments. Project selection is at least as much determined by institutional rules, power, and skills to navigate and direct funding streams, as it is by the technical merit of various alternatives.

The Second Avenue Subway in New York provides a good example of the challenges of infrastructure investment. The NYC subway system has barely kept pace with changing economic and population patterns of the metropolis. For the longest time, capital expansion plans for the subway system had to repeatedly take a back seat behind politically and culturally competing transportation alternatives, economic crises, the automobile boom, and the need to re-invest into the existing system. Now, in a decision-environment barely more conducive, and after nearly 100 years (the line was first proposed in 1920), a part of the subway will go into service in 2016, and in this paper we will outline why.

In this paper we will examine the politics of decision-making of the Second Avenue Subway as an infrastructure investment “megaproject.” In particular, we will elicit where project-related decisions were the results of power struggles between the involved actors, and less of transportation planning concerns. We define megaprojects as projects of more than \$1 billion, projects that are politically and technologically complex, risky and subject to uncertainty, and projects in physical space that alter space by either creating new or extending existing transportation options. The Second Avenue Subway is a “typical” megaproject: in terms of its enormous costs – the current construction is \$4.5 billion, its politically complex decision environment, as well as its expected impact in New York’s transportation network. Consequently, some of the political experiences of the decision process may also be generalized.

While there were a lot of reasons the project was not built, we will mainly focus on why it was. We argue that the re-organization of the transportation landscape, specifically the formation of the Metropolitan Transportation Agency (MTA), enabled project success. The MTA is a state-chartered, special-purpose agency set-up in 1968 that is responsible for public transportation in the New York portion of the region. As a state-chartered agency, MTA capital decisions are subject to the approval of the MTA Capital Program Review Board (CPRB), which represents various state and local interests. Funding for the Second Avenue Subway is included in various MTA Capital Plans for the New York

Transit Authority (TA), an MTA subsidiary. Transportation agencies are bound by the rules of those who create them. They have their own agendas and are crucial for project selection. If successful, they channel politics and may establish political momentum against political and fiscal adversity.

Though the Second Avenue Subway was not a very controversial project, the political competition for other projects was fierce. The MTA appears to implement the project nonetheless successfully: the ground was first broken in the 1970s, but it was halted because of city bankruptcy and more pressing system maintenance issues; the second groundbreaking took place in 2007. In order to find out how the important political lines of inquiry will be agency politics. How did the MTA, against all the odds and after heavy debates and politically wrangling, decide to build the project, approved it internally, and then achieved project approval on the state board that is responsible for the oversight and approval of MTA capital projects – the Capital Project Review Board (CPRB)?

We found that five key factors played a role in the selection and success of the Second Avenue Subway. First, its long history as a replacement project for the Second and Third Avenue elevated lines, underlined by repeated calls for the project from a litany of stakeholders, helped ensure that the project was not forgotten. Second, a special-purpose agency (MTA), with its own fiscal and political aspirations, skillfully maneuvered it onto a relevant agenda. Third, powerful project champions took a personal interest in advancing the project's success. Fourth, some of the funding arrangements removed competitive aspects from the project. Related to the funding agreement, the project was to be built in phases. And fifth, positive federal ranking and 9/11 served as a “window of opportunity” that made federal funding more available than it had been previously. Conspicuously absent were transport-economic studies, which were not at the center of the decision.

We begin to build our explanation by preparing an historical outline of the Second Avenue Subway and describe available studies that recommended project selection. This will help outline the logic of the project and situate it within ongoing debates, problems, and actors in the different agenda-setting stages of the project. A debate-centered analysis of the main decision platforms that affected the current construction of the project will illuminate the project politics and deeply entwined funding struggles. All information used comes from extensive historical newspaper and legal resources research, and from in depth interviews with various decision-makers and transport experts in the area, and from secondary sources. For reasons of confidentiality we will cite our interviewees anonymously.

We organized this paper into five parts: first, we begin with a brief literature review of writings, which reference this singular megaproject. The second is a short summary of the project's main features. In the third section, we lay out the general history of the Second Avenue Subway. We organize the fourth part around the sponsoring agency and its role in the decision-making process. In the fifth part, we conclude.

2. Literature Review

Over the course of its long history, the Second Avenue Subway's initiatives and failures have been addressed in a surprisingly limited number of articles (Stelter, 1990, Grava, 1980). Stelter discusses the justifications for tearing down most of New York's historic Elevated Transit Lines (the "els"), over the course of more than three decades. He cites business and real estate interests as the main justification for replacing the els with an underground service (Stelter, 1990). In 1980, Grava provocatively argued that the Second Avenue Subway project has, from the beginning, been both over-hyped and under-justified, lacking clear decision rationales and established evaluation procedures (Grava, 1980). Berechman and Paaswell focus on the decision-making criteria that have informed various infrastructure projects in the New York region, using the Second Avenue Subway as one of their case studies. They find that there are – in cost-benefit terms – more relevant projects to be built in the New York area.

In the general megaproject literature, the importance of politics in megaproject decision-making processes has been addressed. It has been used to explain project selection issues (Berechman and Paaswell, 2005, Swyngedouw et al., 2002, Peters, 2010), implementation problems (Altshuler and Luberoff, 2003) and cost overrun (Flyvbjerg, 2003, 2010). Altshuler and Luberoff's study on "American megaprojects and the changing politics of urban public investment" provides insights in the changing urban politics over the past century, locating infrastructure within external frameworks of prioritization: first, the isolation of urban localities in terms of financial resources from higher levels until the 1950s, then a boom phase ("the great mega-project era," p. 8) that benefited massive public investment aided by financial aid from all levels, especially for highway programs. The authors define the mid-1960s to early 1970s as a third phase a backlash against the megaproject boom of prior years, characterized by protests and community activism, and then finally the era of "do no harm," which reaches to the present, and where public investment is limited, but still an important local development strategy, and the focus on less environmentally disruptive or harmful projects. Additionally, they examine a range of political theories applicable to the decision-processes (Altshuler and Luberoff, 2003).

To understand the role and politics of the MTA, we drew on two insightful sources: Terry Moe's work, which provides a broad insight into institutions, cooperation and power; and Jameson Doig's specific work on the power of a special performance agency.

Moe holds that political institutions in the political process are not only vehicles to facilitate cooperative transaction – as understood by most social choice theorists – but vehicles of power as well. Power relations, to a certain degree, are inscribed in the institutional set-up. Thus, there are certain limits to what an agency can do or decide, and what not: its agenda-setting powers, the number and range of actors that need to be consulted with respect to certain decisions. Any big MTA capital decisions, for example, need to be confirmed by specifically defined state actors with their own set of interests.

There are five distinct political features special to the design of public authorities, which are – as with all institutions – subject to internal and external pressures that complicate their ability to implement effective policy. First, public authority is "up for grabs": it is

essentially coercive and competitive in nature. Second, politics are uncertain, and power is transitory; this uncertainty affects the contours of institutions as they are designed by the “winners” according to both some programmatic ideas, and a desire to maintain power. Third, agencies involve compromise, particularly under majority rules that necessitate appealing to those who oppose their design, which results in undermining agency performance. Fourth, the exercise of public authority creates counter-structures of groups trying to lobby, influence elections or otherwise gain control. Five, public authorities are by nature imperfect, and not truly designed for efficiency. They are vastly different from economic models of organization (Moe, 1991, pp. 123-126).

Therefore, the influence of the legislative principal shapes the range of possible legislative decisions. Another aspect of this is that the principal has vested the agency with certain rules and structures to “keep [it] from doing what it would otherwise want to do, such as pursuing policies more to its own liking” (p. 228), while the agency is using its informal advantages to promote its own inclinations. In sum, bureaucracies and institutions, beyond the tensions described in the prior paragraph, start developing and promoting their own agendas. These mechanisms might play out as agenda control, or have budget implications (Moe, 2005).

Jameson Doig’s work on the Port Authority, another important transportation agency in the New York metropolitan area, focuses on the role and power of the agency itself. He argues that, besides the specifics of the metropolitan polity, the agency’s politics and power are shaped by the stability of leadership, its leading characters, and the tension between agency autonomy and democratic accountability. Doig categorizes the Port Authority as a “special purpose” agency, a structure that results from the desire or need to construct infrastructure unaffected by the rhythms and motives of politics. He explores the changing patterns and character of the Port Authority over time, and explains how the increasing encapsulation of decision-making within the agency has resulted in impressive projects, but has also impacted its public accountability.

Both accounts provide the tools for analyzing one of the most important tensions of infrastructure decision-making in democratic countries: the tension between normative decision standards informed by democratic requirements v. the requirements of getting infrastructure projects done. Moe’s work is helpful in understanding the external and internal decision-making dynamics of a government agency that is entwined within a dense network of metropolitan power struggles. Doig’s work reminds us of the importance of both decision-making mechanisms, and the need for transparency in that process.

3. The Second Avenue Subway: a Brief Project Summary

The Second Avenue Subway was first mentioned in 1920, and more specifically proposed by the New York City Board of Transportation in 1929 as part of the second stage of the IND system (short for the “independent” system) that would replace the Second and Third Avenue Els. In October 1929, before any construction could begin, the stock market crashed and the project was put on hold. In the 1940s, 1950s and 1970s both Els were torn down anyway; but subway construction was still not begun. Its continuing

delay was due a lack of funding² and a generally deteriorating subway system, as well as a widespread “highway boom” and a federal lack of interest in mass transit. First pieces of the Second Avenue Subway were built in the early 1970s, a few years after the founding of the MTA in 1968; but construction was halted when New York City nearly went bankrupt in a recession, and a “rebuilding” the of existing subway system became more urgent than capital expansion.

At the beginning of the 1990s, the Second Avenue Subway efforts restarted for a two-track line. The final design for the first phase, as authorized by the Federal Transit Administration, started in April 2006. The entire project is shown in Image 1 below. According to the MTA Second Avenue Subway information website, the first phase is the segment between 96th and 63rd Streets on Manhattan’s east side. This section includes stations at 63rd Street, 72nd Street, 86th Street, and 96th Street. Service on the Second Avenue line (initially an extension of Q-service) will proceed across 63rd street for a connection to the Seventh Avenue subway and then proceed south through Times Square to Lower Manhattan.

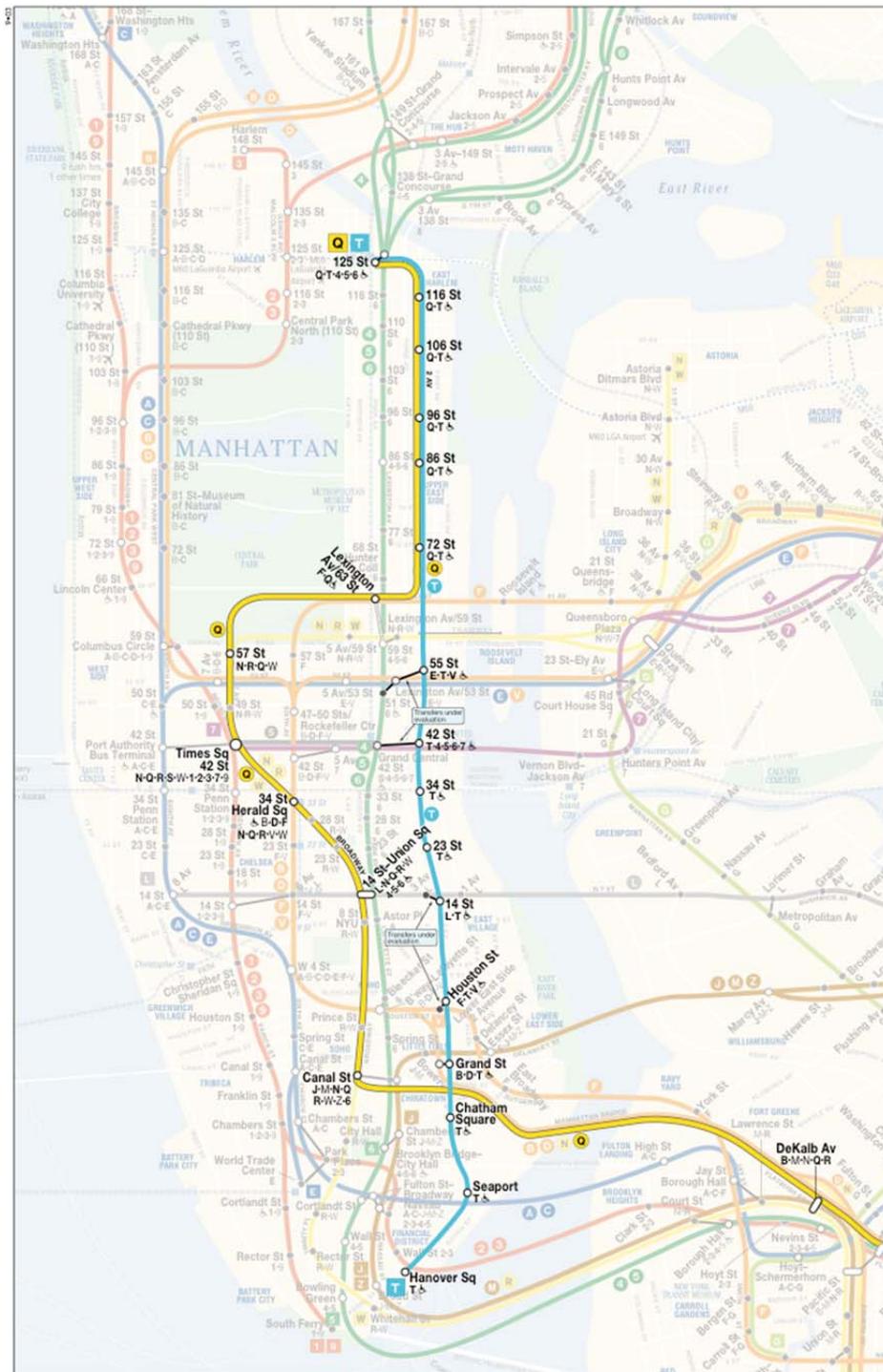
The first construction contract was awarded in March 2007, and groundbreaking for Phase One began on April 12, 2007. The projected ridership for the first phase was projected to be 213,000 riders daily. The proposed costs were \$4.5 billion for the first phase, and \$13.3 billion³ for its entire length (or \$16.8 billion in year-of-expenditure dollars) (FEIS, 2004). At this point, the first phase of the line is fully funded through allocations from the three capital programs and the Federal New Starts program (FTA website). So far, the project has braved the 2009 recession and is expected to open in December 2016.

The funding sources for the capital plans are as follows: \$1.3 billion from the Federal New Starts program, \$3 billion from state and local sources, and \$450 million by a 2005 State Transportation Bond Act.

² although New York City voters voted on a Bond Issue that provided for the project in 1951

³ The source does not state whether this projection was linked to inflation.

Image 1: Second Avenue Subway Phasing



Second Avenue Subway
New York City Subway Service with Second Avenue Subway Line

Figure S-1

Source: MTA Second Avenue Subway website

Several decisions lie ahead: first and foremost, whether there will actually be a next phase implemented (Interviewee 2); and second, if so, where the next phase of construction will occur. It could either go north to 125th Street, and over to Lexington Avenue with a transfer station, or it would go south to Whitehall Street. In southern direction, there would be two segments: the first from midtown to Houston Street in lower Manhattan, and a subsequent piece to then continue from Houston Street to Whitehall Street. All indications point towards the northern extension as the next stage, though this is not yet definitive.

4. The Second Avenue Subway: A Long History

The political complexity and plethora of transportation agencies in New York's metropolitan area, renders any completed transportation megaproject nothing short of a miracle. The Second Avenue Subway was even more of a miraculous achievement, judging by the number of times the project was *not* built over the past several decades. Since the idea's inception, the project never entirely disappeared from the public radar, nor from political agendas or debate. The enormous anticipated cost actually did little to shatter the project's perceived need; As Grava argues, the project was always more like an unquestioned political promise and lacked more specific justification, so changes in the city or metropolis did not shake the idea (Grava, 1980, pp. 34-35). Over the decades, the project branded itself into the history of New Yorkers, as New York's "most famous thing that's never been built." (Russianoff, 2005), while Manhattan's 4/5/6 subway lines on the East side –because the east side els had never been replaced— were consistently overcrowded.

For a historical presentation we organized the long and complex evolution of the project into four major phases, roughly sorted by the major reasons for project delay: recessions, the highway boom, a deteriorating subway system. This will prepare for analysis in the second major part of the paper.

The First Halt: Recession

The project was first mentioned in 1920. At this time, the subway was publicly owned and operated, under contract by two private operators as two separate transit systems; at that time, the municipal government sought to add a third, publicly owned and operated the IND system, to replace the Els and generally improve service (Hood, 1993). The NYC Board of Transportation (BOT) planned the IND system in two stages, the first in 1924, and the second in 1929. The Second Avenue Subway was in the 1929 plan. In 1940, the City acquired the operating rights to the private systems, and integrated them with the independent system into one municipally run subway network.

Part of the plan was to run a line along Second Avenue from – Houston Street in Lower Manhattan, to the Harlem River – with an expected opening by 1941, at a cost of \$86 million. However, by 1940, the first stage 1924 IND plan was completed with local funding and a small amount of federal funds (Hood, 2003). However, the second stage never was completed because of the stock market crash and disappearing municipal income. In 1931, the planned Second Avenue Subway opening was re-scheduled to 1948.

By 1939, the cost estimates adjusted upwards to \$249 million, but construction was suspended for the duration of World War II (Second Avenue Sagas, 2013).

Civic, business and real estate pressure led the Transit Authority to replace the Els, which were being torn down beginning in 1939. In his case study of the Third Avenue El, Stelter shows how ridership decline and increasingly costly maintenance were used to justify its demolition – before the Second Avenue Subway, its replacement, was in place. But Stelter argues that it was the drastic service cuts that, in fact, led to declining ridership numbers and the increased use of alternative means of transportation, as opposed to a lack of demand. Since the transportation agencies were strongly fragmented, the Els were well used, and their replacement with a subway expensive. The demolition plans were met by strong skepticism by elected officials, civic and union leaders, and businessmen, particularly since no reliable alternative was in place. But their demolition became more feasible in 1940, under the municipally run transport system (Stelter, 1990).

Both the Second and the Third Avenue Els were torn down *before* the first time ground was broken for the Second Avenue Subway. The Second Avenue El closed in 1942, and the Manhattan portion of the Third Avenue El closed in 1955. The last section of the Third Avenue El, part of which is shown in Photo 1, was closed in 1973. So, although the Els were had been equally as overcrowded during their use (NYT, Duffus, Sep. 22, 1929), in effect the amount of service on Manhattan’s East side was cut in half without replacement. (Derrick, 2001, pp. 236-238)

Photo 1: Demolition of the Third Avenue El



Source: Image provided by Peter Derrick (photo taken around 1974, Third Avenue at Fordham Road, Bronx)

Competing Priorities: Highway Boom

From the 1940's-1960's, New York City stabilized in population and the metropolitan structure changed. The automobile was seen as the means of transportation of the future, and the city and the surrounding suburbs experienced an unprecedented automobile and highway boom. During that time, in 1953, the authority over subways, until then operated by the New York City Board of Transportation, was transferred to the State-chartered Transit Authority. The general political climate became less favorable towards transit and most money went to the highways system, until, in 1964 the federal government began its focus on transit with the Urban Mass Transit Act.

During the highway boom, a good part of New York's policy power had been concentrated in the hands of Robert Moses (in office 1924-1968), whose preference for building highways over investing in mass transit helped shape New York's suburbs. Moses, who becomes transportation commissioner in 1933 and as such was responsible for the capital budget, had no use for transit. He went out of his way to deter any transit spending: for instance, even when asked to build provisions for later transit on the Long Island Expressway – a new highway project in planning – he refused to do so (Caro, 1975. At the same time, the federal government did not give any money to transit, either, so there was not much of a chance for new transit expansion.

The idea of a Second Avenue Subway remained popular because of continuing political promises and their repetition in the press. This “continued official sanction over several decades” fixed the subway in the public mind (Grava, p. 34). According to Grava, every NYC Mayor – from John Francis Hylan in the 1920's, to Abraham Beame, under whose reign the first construction took place – was supportive of the project, and made it a political promise (with the possible exception of Fiorello LaGuardia (1934-1945), as Grava notes.) Politicians, planners and the media still continued to search for ways to get started, and somehow everyone was confident that construction would begin soon. As soon as the idea came up to tear down the Second and Third Avenue Elevated Lines, the Second Avenue Subway was specifically promoted as a replacement project. For instance, in 1940 Mayor William O'Dwyer promised that work on the design of the Second Avenue Subway would start within four years (Grava, 1980, p. 34), so that the Els could be demolished.

In sum, New Yorkers were very optimistic about the project, particularly as a replacement for the Els. Grava captures the optimism well: “In 1951, a \$500 million city bond issue was passed that promised major expansion of the transportation system, particularly along Second Avenue (although it was vocally opposed by Queens politicians and residents). *The Third Avenue El was demolished in the mid-1950s because construction of the new subway was just about to begin*” (sic) (Grava, 1980, p. 34 – our emphasis). The bond money, however, was now being spent on the replacement of subway cars, as the state of the subway system had deteriorated badly in the meantime: pressing signs of decay, operational deficits and dropping passenger numbers.

Despite the odds, various plans, White Papers (e.g. Mayor John Lindsay's White Paper of 1965 that proposed a Second Avenue Subway including an extension into the Bronx), and technical studies were commissioned. A state bond issue act was passed in 1967, providing yet another \$500 million for design and construction of the Second Avenue Subway (Grava, 1980, p. 35), but then the TA ran out of money. Grava notes that after all the different developments and changes in New York, the subway project was never thoroughly examined and re-evaluated, at least according to the standards of our time.

Though after the Moses era subway optimism picked up again, it had become increasingly obvious that New York's subway system now required investments in maintenance rather than new construction. It was not until the Metropolitan Transportation Authority was created and the government, and the Federal government provided larger sums, that the Second Avenue Subway became a plausible reality.

A New Transportation Agency

In 1968, William Ronan, the "Empire Builder" (Derrick, 2013) reorganizes the regional transportation system by integrating all formerly independent agencies like the Long Island Rail Road, New York City Transit and the Triborough Bridge and Tunnel Authority into one state agency: the MTA. This involves a huge transfer of power from the city into state hands, helping to dis-empower Robert Moses. The new special purpose authority was created to develop and organize a unified regional mass transportation policy, including parts of New York State, as well as two Connecticut counties. Within the MTA, the Transit Authority is responsible for subways.

New York State established an internal and an external decision-making platform: first the MTA Board and then later, in 1981,⁴ the Capital Program Review Board (CPRB). The chairman of the MTA Board, nominated by the New York State Governor and approved by the State Senate, serves for six years and provides the face of the agency.⁵ As of 2013, the board has seventeen members, also appointed by the Governor, who serve for six years as well. (The MTA board was smaller in 1968.) The Mayor of New York City recommends four officials, and each of the counties of Nassau, Suffolk, Westchester, Dutchess, Orange, Rockland and Putnam recommends one. Commuter councils for Metro-North or the Long Island, as well as Metro-North Rail Road Unions have been listed as recommenders, too. Each representative has one vote, with the exception of the latter four counties, which hold one collective vote (MTA website). Once the MTA Board approved the capital plans, they submit them to the Capital Program Review Board.

New York State's CPRB approves or disapproves the five-year capital funding programs proposed by the MTA board. The CPRB has four members, representing the State Governor, the State Senate, the State Assembly, and the New York City Mayor. Each of

⁴ The State Legislature created the Review Board in the same Transportation System Assistance and Financing Act that confirmed the 5-year plans to confront the public transit crisis of the 1970s.

⁵ List of Chairmen: William Ronan 1968-1974, David Yunich 1974-1977, Harold Fisher 1977-1979, Richard Ravitch 1979-1983, Robert Kiley 1983-1991, Peter Stangl 1991-1995, Virgil Conway 1995-2001, Peter Kalikow 2001-2007, Dale Hemmerdinger 2007-2009, Jay Walder 2009-2011, Joseph Lhota 6 months in 2012. (MTA website)

these members has veto power over the capital plan. The Senate President appoints the Senate member on the Board. The elected assembly member represents the State Assembly Majority. Usually, the State Department of Transportation Commissioner is the representative for the Governor. The appointee for the New York City Mayor has no vote on Metro North or Long Island Railroad capital plans. Another non-voting member represents the State Assembly Minority (Higashide, 2010). There are two official capital plans, one for the TA, and one for the commuter railroads.

Both boards were relevant decision points for the subway: the MTA Board decided to put the project on the agenda and set aside (partial) funding for it, and the CPRB later approved it. The politics of decision-making play out on both boards.

Before the MTA’s founding, the subway and bus system were technically run by state agencies, although publicly perceived as local, city matters (Interviewee 3). The creation of the CPRB solidified New York State power over New York City transport projects by holding three independent vetoes from the Governor and the State legislature over potential NYC projects, while the NYC mayor holds veto power only over NYC projects.

From the start, money has been an issue for the MTA with its deteriorating subway system. Money was needed to fix the system. Richard Ravitch, board chairman from 1979-1983, successfully introduced long-term capital plans through the Transportation System Assistance and Financing Act of 1981, to enable the sub-agencies to plan their budgets and crucial repairs (Lardner, 1984). While prior allocation decisions had been conducted on an annual basis (although small agencies had their own, long-term range plans), Ravitch’s plan provided the MTA with the authority to issue bonds, and introduced the 5-year capital programs (PCAC, 2012).

Table 1 provides an overview over these capital programs from 1982 - 2014. Since the first capital plan (1982), the agency has received funding from federal, state and local sources, with an average of 31.4%, 27% and 7.2%, respectively. Debt financing has funded the remainder. In 2012, the agency had \$32 billion in long-term debt, with an annual debt service of \$2.3 billion. Additionally the agency took out loans from the Federal Railroad Administration (all information: PCAC, 2012, p. ii).

Table 1: MTA Capital Program Funding Sources

Capital Programs	Funding Sources	Use
1982-1986	Federal 33%,	\$14.399 Total Core Program State-of-good repair works and service improvements
1987-1992	MTA Bonds 29%, State Capital Grants 15%, Other 13%, NYC 10%	
1992-1999	Federal 33%, MTA Bonds 26%, Other 20%, State 12% (11% DTF bonds), NYC 9%	\$0: MTA Capital Construction (MTACC)*
2000-2004	Federal 27%, MTA Bonds 26%, MTA Debt Restructuring 21%, State Bonds 18%,	\$16.713.3: Total Core Program State-of-good repair works and service improvements \$157.7: MTACC
		\$17.5 billion for Second Avenue Subway:* \$1,050 (\$744 local, \$306 federal)

	Other 5%, NYC 3%	
2005-2009 2005 Transportation Bond Act	Federal 39%, State 27% (State Bonds 18%), MTA Revenue Bonds 18%, Other 5%, NYC 11%	\$22.56 billion for Second Avenue Subway:* \$1,914 (\$846 local, \$1,068 federal, (or \$758 federal, as recorded 7/2013))
2010-2014	MTA Revenue Bonds and State DTF Bonds 66%, Federal 25%, Other 6%, NYC 3%	\$26.3 billion for Second Avenue Subway:* \$1,487 million (\$1,487 local)

Source: Permanent Citizens Advisory Committee (PCAC) Report, 2012, MTA Capital Construction;
*Specific numbers for Second Avenue Subway: Mark Nachbar/ provided by Peter Derrick

From 1982-2011, the budget totals \$84 billion, or \$116.7 in 2011 dollars (PCAC Report, 2012, p. i). Table 1 shows that the first funding of the current project was allocated in the 2000-2004 Capital Program, and another installation in the 2005-2009 program, related to the Bond Act. We will analyze the actors in the capital program debates in more detail in the analysis part below.

The First Second Avenue Subway Construction Attempt under the New Agency

Led its first chairman William Ronan, the MTA decides to develop a profile and massively expand by introducing an ambitious plan called *Metropolitan Transportation: A Program for Action*, and the Second Avenue Subway was on it. The plan was a collection of progressive ideas that had been floating around, though it failed to support them with any relevant hard data – like cost-effectiveness, impact analyses, alternatives evaluations, and so forth (Grava, 1980, p. 35). Ronan was confident the new agency would be better equipped to implement a Second Avenue Subway than prior administrative arrangements, and in the beginning, it looked like it would be successful. However, as the plan began to expand, ever increasing anticipated costs became a significant conflict.

It started with a bang: Governor Nelson A. Rockefeller (1959-1973) presented the plan – the “grand design” that would expand the subway system, and overhaul other mass transit facilities in the metropolitan area. Some of its key elements included a subway line into the Bronx, extensive new service in Queens, and the Long Island Railroad spur to John F. Kennedy Airport. The Second Avenue Subway was still to replace the Second and Third Avenue Elms, in order to provide more subway service on the East side of Manhattan (NYT, Witkin, Feb. 29, 1968).

Ronan, who had strong support from Rockefeller, began advocating for the project extending from Whitehall Street – at the southern end of Manhattan – to 138th Street in the Bronx, at a price of \$335 million (NYT, Neuman, Apr. 9, 2007). Ronan had powerful backing besides Rockefeller, as well: the media, many local politicians, and influential interest groups all wanted the project. Chief among them were financial district interest groups, focused on the planned development of 120,000 new workers to fit expanding transportation needs – a plan that got the necessary support and approval within the MTA. Furthermore, the residents of the poor Lower East side successfully demanded access to the new subway as well, though their piece would have been completed later on

in the construction process. The residents of other neighborhoods (Upper East side, Yorkville, and Harlem) also had a costly influence on the proposed plan, augmenting the station alignment scheme by forcing the MTA to plan for more frequent stations (Grava, 1980).

In September 1968 the New York City Board of Estimate (a government agency that was responsible for budget and land use questions) cleared the way for the entire “grand design” scheme: it was expected to add \$500 million to the city’s budget (the total cost was estimated at \$1.26 billion). The State would provide \$600 million from bond issue funds, and the Federal government was expected to provide the remainder. Of that portion, the Board approved the Second Avenue line from 34th to 126th street, and a later extension south to Battery Park, but as a two-track instead of a four-track line (NYT, King, Sep. 21, 1968). Within a few years, the project was on track; and, in a highly publicized ceremony (with Governor Rockefeller and New York City Mayor John Lindsay in attendance), ground was broken in 1972. Three pieces were then completed: the tunnels between 99th and 105th Streets, 110 and 120th Streets, and another one near the Manhattan Bridge at Canal Street (New York Magazine, w/o year). (The tunnel pieces have just been sitting there and not been in use until the current construction.)

Photo 2: Second Avenue Subway Groundbreaking Ceremony 1972



Source: *New York Times* “Mayor John V. Lindsay swung his pickax at a subway groundbreaking in 1972. Looking on, from left, were Percy E. Sutton, the Manhattan borough president; Senator Jacob K. Javits; John A. Volpe, United States secretary of transportation; and Gov. Nelson A. Rockefeller.” (NYT, Neuman, April 9, 2007)

Construction Halted: Another Recession and Maintenance Priorities

As noted above, at the time of the fiscal and economic crisis of the 1970s, the MTA found itself in a financial crisis, too. In 1972, the projected price for the subway had risen

from \$335 million to \$1 billion, and to \$1.3 billion the year after. One year after the groundbreaking, Mayor John Lindsay publicly stated that subway construction would probably have to stop if more Federal funding did not come in (NYT, Neuman, Apr. 9, 2007). While the costs escalated, no new funding was made available. Though voters approved the 1967 bond issue, but the money not used for the subway. Two bond issues (1971 and 1974) were defeated because highway and transit proponents were not able to agree on the proposed budget allocations (Interviewee 3). At the same time, economic recession sent the City's income base spiraling down, so that it did not have the 20 percent matching funds to balance the federal 80 percent (Interviewee 2). So the MTA ran out of money for the project and construction was halted in 1975.

By 1979, New York City's existing subway system was in such bad shape that the newly incoming MTA chair, Richard Ravitch, prioritized bringing the city's subway system back into a "state of good repair" and introduced five-year capital programs to regain control. Subsequently, over the next few capital programs, money was allocated predominantly for repairs and maintenance, while capital project expansion plans were put on hold until the 1990s.

5. The Politics of Decision-Making

Second Avenue Subway construction was re-started with the ceremonial groundbreaking on April 12, 2007. The first phase of the Second Avenue Subway is currently under construction and scheduled to open in 2016. This section will focus on the politics of decision-making that led up to it. Effectively, within the MTA and the Capital Program Review Board were the main decision-making platforms where politics played out.

MTA Decisions

Given the bad state of repair of the subway system, Ravitch, in the 1980s, had not been able to expand the subways, but had to stop the existing system from falling apart by redirecting all funds towards repair. But when the time was right, Transit Authority staff made sure the project got back on the schedule. In 1989, leading planners within the TA proposed to include money for project studies for a Second Avenue Subway in the next capital program. David Gunn, head of the Transit Authority from 1984-1990, supported this agenda, and, after some more or less convincing of the MTA chairmen and Board, the MTA allocated \$700 million for project studies on the Third Capital Program (Interviewee #3).

Two MTA Chairmen spoke on behalf of the project during the budget negotiations of 2000 and 2004. MTA Chairs Virgil Conway (1995–2001) and Peter Kalikow (2001–2007) both helped advancing the project against some head winds. While Conway did not outright support the project, he did not oppose it either. Kalikow has been described as a "project enthusiast" (Interviewee #1) who did not need much convincing. So within the MTA all was set, and all that was left to do to build the subway was to make sure the CPRB approved the project. Here we will describe some of the studies project selection was based on before turning to the politics.

Project Studies and Selection Criteria

There is no question that the project had a lot of supporters. Every one of our interviewees – most from New York transportation agencies, including the MTA – emphasized that project selection was not difficult, and that the project was a “no-brainer” (Interviewees #1). As one of our interviewee from the TA who was involved in the planning process states: “I often felt that, unlike similar studies I was involved in or observed, I had the unique problem that people, both inside and outside our agency, presumed that a Second Avenue line was justified, and should be built if only the money could be found” (Interviewee #4). Our question now is how, under continuing budget pressures, the MTA selected the project: what were the transport-economic considerations and study process. To this end, we will summarize some of the project selection critique, and then outline various studies and efforts that addressed project selection.

Project critics were not too numerous. They question the rationale of project selection (Grava, 1980), and the absence of transport-economic studies (Berechman, 2009). In 1980, Grava, then Vice President and Technical Director for Planning at Parsons Brinckerhoff, and Professor of Urban Planning at Columbia University, criticized the project for its lack of realistic application. Despite the political and media support, financial crises and anti-transit resentments were hindering any real capacity for such a project. He questioned why, even in periods of dropping passenger volumes and interest in transit, (like the post-war periods), the Second Avenue Subway stayed on the agenda – without serious transport-economic evaluations: “construction was started in 1972 without a fundamental evaluation of feasibility or need at that time, although the basic conditions had changed dramatically over several decades and unrecognized forces were strongly present” (Grava, 1980, p. 33).

There is critique for the current project as well. Berechman and Paaswell conducted a comparative cost-benefit study of several large infrastructure investment projects underway in the New York metropolitan area. They find that the Second Avenue Subway did not rank among the first three projects to be recommended, mainly because of its massive capital needs and long construction time (Berechman and Paaswell, 2005). It has been suggested not to expand the construction beyond the first phase, as the money would be better spent on continuing to bring and keep the subway system in a state of good repair (Berechman, 2009).

Other criticisms, on the other hand, are directed at the “truncated” project outline. This mainly refers to the political (and funding) compromises involved in implementing the project in stages – and without a connection into the neighboring boroughs. Diana Fortuna, head of the Citizen’s Budget Commission, argued that this project is not needed: “Capital improvements planned by the Metropolitan Transportation Authority should accomplish two things: reduce crowding on the subways during rush hour and support economic expansion by accommodating more workers bound for midtown Manhattan. By these criteria, the agency’s plan for the Second Avenue Subway is either too much or too little.” In the dimensions of the first phase, \$3.4 billion [the estimate in 1999] would be an extraordinarily expensive way to reduce crowding on the east side; and, if the

intended goal is to move workers more efficiently around the city, the Second Avenue Subway should extend into other boroughs (NYT, Fortuna, 1999).

As these critiques indicate, there was some skepticism around the transport-economic sensitivity of the project. In the following, we describe some of the studies that have been conducted.

Within the Transit Authority, in the mid-90s the MTA/ TA initiated the Manhattan East Side Transit Alternatives (MESA) study (final draft published in 2001). MESA contained a Major Investment Study (MIS) part, and a draft Environmental Impact Statement. The EIS would be pursuant to federal requirements if applying for federal funding. MESA looked into “transportation problems and needs” on Manhattan’s overcrowded east side and compared several approaches on how to improve transportation conditions there. The Second Avenue Subway was found to be the best solution to the problem of insufficient east side transportation services.

The MIS established project need based on five problems: the limited capacity of the current system, limited transit accessibility, travel time problems, decreased system flexibility (unpredictable bus and subway service in the area due to overcrowding), and environmental and socio-economic concerns. The study then evaluates and compares different alternatives along Manhattan’s east side, like Second Avenue Subway segments, Lexington Avenue Subway segments, bus alternatives, Metro North Stations, light rail options, elevated trains, private and ferry services, and no-construction alternatives, based on the characteristics below.

Within the scope of the MESA study, the Second Avenue Subway made it through various screening stages. In 1999, a draft report was published that considered the no-build alternative, bus lines along First and Second Avenue, and the Second Avenue Subway segment as it is being built right now – with an alternative (and dismissed) option of building a light rail line down to Lower Manhattan. After an initial, “coarse” screening, the remaining projects were examined for the following characteristics: total cost, average speed, transfer options, impacts on existing transit systems, engineering complications, use of existing tunnels, unresolved issues, potential for community/public support, expanded rapid transit area, ridership (comparison of ridership levels among same-mode options), street and operations impacts, legal issues, construction impacts, the possibility of phased construction, and implementation schedule.

During the final screen, partial cost-benefit analyses eliminated some of the full-length options: “The final screen involved an analysis of specific quantitative and qualitative data for each of the remaining alternatives. Preliminary model output (including ridership and travel time information) and capital cost estimates were used to perform a partial cost benefit analysis. This screen also used qualitative screening criteria, including a definition of accessibility; potential for displacement; service to low-income, minority, and transit-dependent populations, community character effects (such as impacts on land use/public policy, visual character, open space, and historic and archaeological resources); hazardous materials issues; traffic impacts; impact on parking and goods delivery; air quality impacts; compatibility with existing transit system; and a general analysis of construction impacts” (MESA, 2001, p. 13). For instance, some projects were

excluded from consideration because the “cost [would be] prohibitive to expected benefits”; others for not being physically feasible, disruptive to the existing transportation system or the neighborhood, not providing sufficient transport-economic benefits, or unable to comply with government or agency policies.

Certain aspects of the full-length project of the Second Avenue Subway, including an eastward alignment and/or an east-west connection, were eliminated during the second screening because of “cost-effectiveness and impact factors. “The full-length subway without those options and the north subway with Lower East Side subway shuttle (which had been developed in Screen 2) were eliminated in Screen 3 because of high capital and operating cost and high cost factors (cost per hour saved and cost per hour spent in less crowded subway)” (MESA, 2001, p. 14). In the end, the MESA study concluded as that the full-length subway would be best, but suggests in the face of high project costs to build the project in stages:

“The evaluation conducted for Screen 3 concluded that the full-length Second Avenue Subway would provide the greatest benefit in solving transportation problems on the east side of Manhattan. The full-length Second Avenue Subway was also found to have the highest capital and operating costs. To address the most critical problems in the study area first, a lower cost alternative that could serve commuters in East Harlem and the Upper East Side who were traveling to Midtown and Lower Manhattan was selected as preferable to the full-length subway at that time. This lower cost subway alternative, which involved construction of a new tunnel segment between 125th and 63rd Streets and continuation on existing routes from 63rd Street south to Lower Manhattan, did not preclude future extensions of the subway route farther south to provide a full-length subway. To allow for the future pursuit of a full-length subway option, conceptual engineering of the subway alternatives that were advanced past this point were designed to allow continuation of a full-length subway at a later time.” (MESA study, p. 14)

The MESA study cemented the already growing subway support outside the agency. Among others, the Regional Plan Association, which called for a Second Avenue Subway in a well-noted study of 1999 (RPA, 1999). The MESA study and the FEIS (described in the following) combined formed the basis for the MTA decision to go ahead with the Second Avenue Subway.

The 2000-2004 capital program funds also provided funding for the Environmental Impact Statement (EIS), as part of the planned application for Federal New Starts funds at the Federal Transit Administration (FTA). (Federal law in the US holds that an environmental impact statement must be conducted for projects that receive federal funding.) Because of some project critique and in synch with the MIS study, the MTA and the Transit Authority completed all environmental and planning work for a “full length” subway, even if it would be implemented in phases (Interviewee #4). As required, the EIS describes the proposed project in detail, considers reasonable project alternatives, some benefits and cost, and allows for citizens to comment on the drafted version and thus gives them the possibility of participation.

The EIS does not typically discuss transport-economic feasibility, and is not a project selection document *per se*. The study named improving mobility on Manhattan’s east side, achieving economic feasibility and cost-effectiveness, and the maintenance or improvement of environmental conditions to be the main project goals. It compares a

Second Avenue Subway and different alignments to a no-build alternative, and lists the following “enormous” project benefits: bolstering the economy of the city and the region, reduction of subway crowding and the improvement of reliability, subway access improvement, and the reduction of vehicle use and air quality improvement. It also describes the phasing of construction, as a way to address the most urgent needs immediately, as well as an elaborate public outreach process (FEIS, 2004).

Federal funding was approved in 2007, based on the ranking of a Federal study and MTA willingness to proceed in phases. In the Transportation Equity Act: A Legacy for Users (TEA-LU) Federal Act⁶ of 2005, the FTA ranked the project (Phase 1) among the two most important transit investment projects in the U.S., or “highly recommended” projects⁷. Nationally, the project was one of two to receive this tag and designated funding in TEA-LU (Maloney, 2005).

The report ranked the project as “high” for each component of the “land use evaluation” (projects rank highly that address significant transportation problems or opportunities, and provide significant mobility and economic development benefits in a cost-effective manner, e.g. uses existing structures, facilitates transit-supportive plans and policies, high-performance expectations in a strongly used corridor); “high” on the “environmental benefits” rating, as well as the “transit-supportive land use” rating (which evaluates the degree to which transit use is integrated and promoted); “medium-high” in terms of its cost-effectiveness, its mobility-improvement ratings, and local financial commitment (capital finance plan and operating finance plan ratings); and “medium” on operations efficiency criteria. The total project justification rating was “high” (FTA, 2008).

In summation, the MTA conducted project alternatives studies, including partial cost-benefit analyses, and an environmental impact study. Project selection criteria remain somewhat unclear at this point, if measured in terms of a cost-benefit ratio, and outside criticism is still significant. The MTA exercised its decision-making autonomy to get started on the project it wanted. In this sense, the project was not strictly based on criteria of transport-economic feasibility. In the following section, we will address how the MTA succeeded in keeping the project moving through politically challenging territory.

⁶ Every six years the Federal government provides funding through the Federal transportation bill, which is mostly funded by the gas tax. Gas tax money is mostly spend on highways, to a minor degree also funds mass transit projects, depending on State regulation. Within the transportation bills, capital project grants may be capped at 80 percent und the Federal matching grants New Starts program.

⁷ Decision criteria: “Under 49 USC 5309(d), major capital investment grants for the construction of a new fixed guideway system or the extension of an existing system seeking \$75 million or greater in Federal New Starts funds may be made only if the Secretary determines that the proposed project is:

(A) based on the results of an alternatives analysis and preliminary engineering;

(B) justified based on a comprehensive review of its mobility improvements, environmental benefits, cost effectiveness, and operating efficiencies, economic development effects and public transportation supportive land use policies and future patterns and

(C) supported by an acceptable degree of local financial commitment (including evidence of stable and dependable funding sources) to construct, maintain, and operate the system or extension, and maintain and operate the entire public transportation system without requiring a reduction in existing public transportation services or level of service to operate the proposed project.”

(http://www.greenlineextension.org/documents/FTA_NewStarts/FY08_Entire_NS_Report.pdf)

The Issue of Funding

The issue of funding is a driving force throughout the political debates we will outline below. There has never been enough money to fund the project: “In 1953 the money wasn't there because you needed money to fix up the existing system, in 1980 the money is not there, or if he is going to get money, it is going to fight get money to fix up the existing system, because there is never enough to fix the existing system and to build new lines” (Interviewee #3). Compared to the 1970's, the general state of repair of the subway network had improved, but the MTA was not back in a healthy financial state. Nonetheless, as Interviewee #4 puts it, the goal was to move the project idea from “this is something that should be built if we ever had the money” to “we should get the money to build this.”

Funding options were limited for four main reasons. First, as we described in the historical outline, for much of the time the political priorities were on highways, and explicitly not on transit, and federal funding short. Second, in the 1980s the priorities had to be on system maintenance rather than expansion. And third, the regional competition between rural and urban areas, both with their own transportation needs, spreads the financial resources for transportation in the state thin. Fourth, since Governor Pataki cut the MTA funds, the agency had to borrow more money, the repayment of which cuts into the available resources by now.

Besides regular budget sources, two additional sources of funding helped enable the project: First, a significant portion of funding was provided through a successful 2005 State Transportation Bond Act. The bond issue act was the result of a long-term effort by the Empire State Transportation Alliance (a broad coalition of stakeholders) that has accompanied the subway decision-process from the beginning, to accumulate sufficient public support. Robert Yaro, President of the Regional Plan Association (RPA), and Elliot Sander, who has served most city and state transportation agencies, spearheaded it.

Transportation Bond Acts were very important to Second Avenue Subway decisions, because they partly removed the project from budget competition with other projects and agencies, though they increase the debt burden. They also serve as a barometer for public support for the project. Voters rejected bond issues containing provisions for the project in 1971, 1974 and 2000. But they approved them in 1951 and 1967 (though, in both cases, the money was not spent for that purpose), as well as in 2005. The 2005 Bond Issue Act was crucial for our project.

Part of the support effort was RPA's 1999 MetroLink Plan that contracted a lot of media attention. To ensure better functionality of the entire system, and specifically to relieve overcrowding on the Lexington line, the RPA proposed that the time has come to go beyond striving for a “state of good repair” to capital expansion. The document states: “The keystone of MetroLink is a new north-south subway line to be built the length of Manhattan on the east side, largely under Second Avenue, and continuing downtown along Pearl and Waters Streets, and then through a new tunnel under the East River to Brooklyn. This trunk line would connect with existing lines or be extended with branches in seven locations, including an extension into the Bronx, a connection to west Midtown, to Queens, to Grand Central Terminal, through the Lower East Side and the East Village,

a link to the Nassau Street subway in Lower Manhattan, and an extension towards Jamaica and Kennedy Airport on the LIRR tracks.” (RPA, 1999, p. 3)

The RPA plan was crucial in gaining public attention, but even more so in building up a broad coalition of project support. Over the years, the Alliance, a coalition of business, industry, union, environmental⁸ and transportation groups worked successfully to get the Transportation Bond Act approved (Interviewee #1). It won with a 0.1 percent margin. The Second Avenue Subway had been specifically written into the act, but East Side Access was an option also (NYT, Baker, Jul. 13, 2005).

Second, in 2007 the MTA secured part of the funding for the first stage of the Second Avenue Subway through a federal grant. The Federal share constitutes about a third of the total project funding.⁹ We have described the federal grant and some of its conditions above. Here we wish to emphasize that the grant came with the condition to proceed with the project in phases: this removed the question of a full-length subway from the debates. Federal funding has not always been a certainty: The FTA was never particularly interested in New York and its transit projects. Interviewee #6 suggested that it was September 11, 2001 that might have prepared the grounds for the FTA decision to fund the Second Avenue Subway. He argues that the dramatic impacts of that day made the country more sympathetic, shifting attention towards the needs of New York City – or large urban areas in general – that might be the target of attacks.

Calibrating Different Interests in New York State

Now that we contextualized the funding challenges, we proceed to describe the politics that took place. The New York State area is diverse, with very different transportation needs: in the upstate area, people rely primarily on their cars, while in New York City and the surrounding boroughs they rely heavily on the subway. The MTA, a state agency, was created to calibrate the competing infrastructure needs. The Governor and the Legislature hold considerable influence over the agency, and thus the fate of the project. There are two different kinds of relevant politics: appointment and CPRB politics. The key decision-makers are the Governor, and the representatives on the CPRB Board.

The preferences of New York State’s governors matter, because they determine the range of options and funding available to the MTA by their appointment powers and capital plan approvals. Judged by appointment rationale, some MTA Board appointments were more political than others. As Interviewee #3 stated:

“Under three chairmen –Ravitch, Kiley and Stangl— from late 1979 to 1994, the MTA acted pretty much as the independent public authority that was supposed to be. That's not to say Governor [Mario] Cuomo did not have the influence over what MTA did, but there was not a day-to-day interference in MTA's planning or anything. And it made proposals for capital funding and everything like that. Pataki just totally politicized the MTA

⁸ Particularly environmentalists who had been opposed to the project before (NYT, Steinhauer, June 7, 2005).

⁹ The program provided funding for both the Second Avenue Subway and East Side Access (another important regional project, connecting the Long Island Rail Road, a regional commuter system, to Grand Central Terminal in Manhattan). The Federal share of \$1.3 billion for the Second Avenue Subway is a larger amount than New Starts usually provides; still, as a share of the total cost for the Second Avenue Subway (the share is 26%), it is lower than for any other New Starts project.

headquarters – not the Transit Authority, though, because you have to have people who know what there are doing when dealing with railroads and buses. [But] he wanted to have people at the MTA headquarters who would do his bidding.” (Interviewee #3)

Governor George Pataki (1995-2006) appointed Virgil Conway (1995-2001) and Peter Kalikow (2001-2007) as MTA chairmen. Both were (initially) following the Governor’s agenda, and new subway construction was not high on the list for the Governor (Interviewee #1, NYT, Fisher, Apr. 22, 1995).

Because of the MTA chairs political involvements, the project had finally (openly) arrived at the center of the complicated political thicket of NYC political complexities and battles: At this point, Second Avenue Subway’s support became entwined with that of East Side Access. Senator Alfonse D’Amato, a New York Republican whose career was financially supported by Peter Kalikow and Governor George Pataki, was a strong proponent of the East Side Access project. When the time came to find funding for the Second Avenue Subway, Kalikow departed from his loyalties from Pataki and supported the Second Avenue Subway, although it was not the project of choice for his political mates, *per se*. This allowed the necessary negotiation leverage for the Second Avenue Subway project’s champion, the Democrat Sheldon Silver –also on the Capital Program Review Board— to use the other big MTA project, East Side Access, as a lever for Second Avenue Subway approval.

Directing the Funding Streams: The MTA Capital Programs

The Second Avenue Subway funding was subjected to the state review board three times so far, as funding was negotiated twice during the relevant time: in the 2000-2004 and in the 2005-2009 capital plans, and then in the 2010 program.

Negotiating the 2000-2004 MTA Capital Program

Capital plan approval from the CPRB required a unanimous vote from the Governor, the State Assembly, and the New York City mayor. An aggravating factor was that, from the 1990’s on, similar five-year capital plans were approved for the State Department of Transportation, which is responsible for highways. So, during both periods, competition for funding was high. When the 2000-2004 capital plan was up for debate, project selection itself was more of an issue in the debates. Still, the agency succeeded in getting \$1,050 million specifically for the Second Avenue Subway included in the capital program – already quite a commitment. Next, we will consider the different positions of the CPRB representatives during the negotiations for the 2000-2004 capital program.

Governor Pataki had influence over agency appointments, and veto power over the MTA capital budget. During the 1999 capital plan negotiations, Pataki vigorously supported the East Side Access project, and made his capital program (2000-2004) vote dependent upon getting it approved (Interviewee #6); his intentions regarding the Second Avenue Subway were less adamant. Pataki’s confirmation for the Second Avenue Subway on the CPRB had to be negotiated.

On the other hand, the powerful State Assembly Speaker Sheldon Silver, then representing the Lower East Side, threatened to refuse to approve the budget plan if the Second Avenue Subway was not on it – in full length. Subway access is a strong draw for

the Lower East Side, which is underserved by subways. Silver worked with Pataki's East Side Access preference, and argued that both projects belonged together: the Second Avenue Subway needed to complement East Side Access, because of the increased ridership on the Manhattan's east side that would result from the project. Silver was particularly adamant about project length, and for a while threatened to veto a truncated version of the project – a position he later relaxed in favor of the incremental plan. He got a lot of support from citizen groups, e.g. the respective Community Board (Interviewee #5).

Another related issue in the State Assembly was party competition. The first budget proposal for the 2000-2004 capital plan was vetoed by Senate Republicans (by Republican Senator Dean Skelos) in 1999, and was subsequently revised. The anti-transit sentiment – less pronounced in New York State than it is in the rest of the United States – plays into this as well. At the state level, transit funding has to compete with the likes of highway funding; Senate Republicans, for whom highway funding was a major political issue, blocked the transit plan and the Second Avenue Subway for some time, arguing that there was no comparable state plan for investing in highways (NYT, Neuman, Dec. 22, 1999). The same is true for state bond acts, which provide a 50/50 ratio for both agencies.

To address these concerns and avoid future conflict, the MTA and State Department of Transportation's budget programs were then designed to be coordinated. This increased the chances for NYC subway plans, because both groups would get an equal share. However, the anti-transit votes were not necessarily a partisan issue; much of the divide overlaps with upstate vs. downstate constituencies, and their very different transportation habits and needs. In fact, both houses of the legislature had blocked the capital program at various times to demand changes (NYT, Perez-Pena, Mar. 15, 2000).

Just like the legislature, the voters for the transportation bond acts tend to be regionally divided in upstate and downstate, or anti-transit and transit voters respectively. A \$3.8 billion Transportation Bond Act was rejected in 2000. It would have provided \$1.6 billion to the MTA for its mass transit systems, and \$1.9 billion to the state highway program. The Second Avenue Subway was officially written into the proposal, and so were the extension of the N-Train to LaGuardia airport, a Metro North extension to Penn Station, and an extension of the Long Island Rail Road to Grand Central Station. The outcome of the votes reflected the traditional split between upstate and city (or downstate) voters. Upstate voters rejected the plan 2:1, NYC voters approved it 2:1, and the suburbs provided a narrow approval. In the end, the supporting votes were not sufficient (NYT, Lipton, Nov. 3, 2000). So the money that would have gone towards the subway had to be found elsewhere.

The project was not on the top of the list of the New York Mayor, either. While we have described some of the attitudes in the historical section above, New York City's last two mayors could hardly be considered Second Avenue Subway enthusiasts. Rudolph Giuliani preferred another capital project: he strongly advocated the extension of the N line in Queens, to LaGuardia Airport. And Michael Bloomberg, while supporting the 7-Line Extension, was ambivalent about the project at best, especially if it would not extend

all the way down to the east side. However, each mayor ended up consenting on the Capital Review Board (Interviewee #1).

In summation, all representatives on the CPRB approved the 2000-2004 capital plan – that includes representatives of Governor Pataki, Speaker Sheldon Silver, State Senate majority leader Dean Skelos, and a representative recommended by the NYC Mayor. The plan designated \$1,050 million to the Second Avenue Subway project for environmental studies, as well as some design and construction work. Future funding was left to the next capital plan.

During that capital plan, in 2003, the MTA Capital Construction, an agency set to manage capital projects, was formed to coordinate the ambitious new capital expansion projects within the agency and among its various subdivisions. Among them are the Second Avenue Subway, the Fulton Transit Center, East Side Access, the 7-Train Extension and the new South Ferry Terminal.

Negotiating the 2005-2009 MTA Capital Program

By 2005, the Bond Issue Act was approved, providing some money and establishing project support. Little had changed regarding the political frontiers of the project. At this point, George Pataki, Bloomberg, Senate Majority Leader Joseph L. Bruno and Assembly Speaker Sheldon Silver had representatives on the CPRB. Silver continued to push for the Second Avenue Subway, Senator D'Amato and Governor Pataki, promoted East Side Access program. Now the issues were about scheduling and phasing: while D'Amato was trying to get the East Side Access project fast-tracked, Silver refused and insisted on having both on the same schedule (Interviewee #3).

At the same time, the financial situation at the MTA worsened again, and chairman Kalikow tried to get New York State to raise taxes to pay for the next 2005-2009 capital program. Under these circumstances, the main debates and political wrestling of the time focused on the capital plan budget, and on project finances: the project was, as usual, weighted against the necessary expenses for system maintenance. The MTA requested \$27.8 billion in 2004, but the state and the legislature approved only \$21.1 billion in 2005. The \$21.1 billion made MTA decisions difficult, because it had two capital projects running: the Second Avenue Subway and the LIRR-Grand Central Terminal Link, as well as a third in planning stages – the direct link from Lower Manhattan to Kennedy Airport (which is still not under construction). Emotions ran high. During the budget debates with New York State, MTA Chair Kalikow stated he would be willing to jettison projects like the Second Avenue Subway and just focus on maintenance (NYT, Chan, Dec. 22, 2004).

By 2007, the FTA approved the \$1.3 billion Federal New Starts grant we discussed above, releasing the pressure of finding funding, but it came on the condition of project phasing. Powerful NY State politicians, like Senator Charles Schumer and Congresswoman Carolyn Maloney, both supported the approval (Interviewee #3).

Negotiating the 2010-2014 MTA Capital Program

Of course, funding was short for the next requested MTA Capital Plan (\$26.3 billion in total) as well, the pressure having risen from the 2007 depression and years of

accumulated bond debts. At this point, \$1.487 billion were missing to complete the first phase (see Table 1 above), and the MTA succeeded in raising the funds, after a series of budget negotiations and budget threats. Governor Paterson vetoed the first plan in 2009, because of the desolate financial situation of New York State, which would have provided the largest part of the capital funding. The MTA adjusted their program by shortening the expenditures by \$1.8 billion

Another threat to not approve the budget came from the Republican minority in the State legislature. Power distribution in the NY State Senate was so close, that Republican votes were necessary. They were concerned about a billion-dollar state rescue program for the MTA on the one hand, and a big gap for highway and bridge funding on the other (Neuman, NYT, 2009).

However, the third and last capital program containing budget allocations for the first phase of the Second Avenue Subway was approved in June 2010.

6. Conclusion

In short, in April 2006 the FTA approved construction at a projected cost of \$4.5 billion. Construction began April 2007. The current opening date –although it has been revised several times, is set for December 2016 since 2009. The first phase is fully funded, the following phases, however, at the point of this writing (November 2013), nearly completely up in the air.

In this paper, we outlined the politics behind the Second Avenue Subway decisions. We explained how and why the project got built after such a long time, and how it got selected among competing alternatives, in the competitive world of New York politics. Given the long history of the project and the complex and sensitive nature of NY politics, we were only able to show some of the cursory developments, those on the surface. This is a summary of our main findings, which may be generalized for all large infrastructure investment projects in democracies.

First, a long project history that provides the project idea with some legendary character may be of advantage. The Second Avenue Subway, over the years, was used as rallying point and slogan; it has been wanted for so long that it had become a “tradition” to want it. Further, over the course of time the larger political-cultural environment has shifted from a heavy focus on individual travels and highways and subsequent riots, to a more balanced approach to transportation and more understanding for the plight of urban areas and their needs. Accompanied were larger shifts in federal investment strategies.

Then, second, what policy theorists might call “window of opportunity” is needed – an extremely unlikely “alignment of stars and galaxies” (Interviewee #6) that aligns agendas, politics and funding streams. As one of our interviewees (#6) argued, the horrific events of September 11 made the federal government and Americans in general more empathetic to the (underfunded) plight of the large cities, and more willing to give.

Third, special-purpose agencies have the power to hang on to project ideas, negotiate political support, and find funding. In this case, we find that transportation agencies over

hung on the to project the decades, and in the end the special-purpose agency (MTA), finally implemented the Second Avenue Subway despite budget constraints. The MTA-internal decision to build the project (and that also served to build up outside support) was based on the MESA study, comparing different major investment alternatives, but not a cost-benefit study. Though the MTA needed approval from state and local actors, its leadership skillfully navigated the politics.

Fourth, outside project champions that understand the rules of decision-making are necessary for project success: In this case, Sheldon Silver's support as a Lower East Side representative was crucial. Community boards and a powerful coalition of stakeholders, consisting of unions, business and environmental groups, backed him up. The fact that the CPRB decisions need to be unanimous and that other board members were championing other projects was helpful in this case because board members took to trading votes.

Fifth, the nature of funding and its arrangements has the power to overcome politics. In the case of the Second Avenue Subway, funding from the Federal Transit Administration Start-Up program, as well as federal loans, directly sustain large parts of the project, so that the pressure to compete for funds locally and statewide was diminished. The federal grant did require the project to be built in phases, too. The Transportation Bond Act, another funding mechanism, dodged the crucial upstate reliance by providing equally for both highway and transit projects. We regard the State DOT funding plans that are synchronized with those of the MTA as another important conceptual lever that somewhat removed the pressure from the highway constituencies in the budget competition.

Transportation agencies need some decision autonomy, to assert transportation efficiency criteria in the face of small-scale political objectives like NIMBY concerns. But which decision-making criteria should be employed? Our research showed that the Second Avenue Subway falls short with respect to rigorous transport-economic criteria – in the context of funding scarcity. On the other hand, representatives and voters, public offices and authorities, have approved the project and project funding.

All this raises a basic question about the basis of infrastructure investment decision-making. Shall the decisive criteria be political, e.g. benefit certain neighborhoods, groups or constituencies, or economic? While the economic investment criteria might be a bit more straightforward, there are conflicting arguments for or against having investment decisions be driven by politics or political considerations.

- 1) Project politics are inherently questionable, when they, politically, are single-mindedly driven by the will to get re-elected, or to establish some personal-symbolic legacy.
- 2) On the other hand, politics are not necessarily a bad thing, but part of the societal negotiation process: not all societal ends should be based on economic considerations. For instance, the equal-opportunity aspirations promoted in the United States have the potential to clash with economic (in this case, transport-economic) decision criteria, as the support of disadvantaged groups may be morally and politically desirable, but not always efficient.

Finally we wish to state that so far it was not possible for us to gauge the impact of business or real estate interests and labor unions on the project decision. This will be subject to further research.

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