On The Nature of Transportation

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On the Nature of Transportation

by

Ofir Klein

Submitted in partial fulfillment
of the requirements for the degree of
Master of Arts Geography
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Thesis Sponsor:

May 2, 2019
Date

Marianna Pavlovska
Signature

May 2, 2019
Date

Ines Miyares
Signature of Second Reader
Dedication:

Texts are never produced in solace; they simply never come into fruition through a singular medium: the author. While texts inscribe a name onto its surface, while they proclaim an author, an authority, any writer knows all too well their indebtedness to those external and internal dialogues, to those discussions between writer and those who speak to them. This thesis contains just as much of you, as it does me. Indebtedness, acknowledgment, appreciation, these are simply words, but words that carry forth such experiences, such appreciation and gratitude. This all cannot communicate totality that is the impression you all have inscribed into me. Nevertheless, one must do the seemingly impossible, and attempt the impossible.

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Chapter 1.0: Introduction and Literature Review

1.1 An Intertext

Within the history of capitalism, cities have played a major role in both the production and reproduction of not only everyday life, but also of capital. From the perspective of our current day and age, urbanization has shown itself to be a global phenomenon. While talk of the urban phenomenon as an ecological system enveloped the American sociological discourse during the first half of the twentieth century, discussion of this phenomenon found new breath and height during the second half of this same century, as the literature review of this thesis will aim to show (Parks and Burgess 1921; Parks, Burgess, and McKenzie 1925; Parks 1936; Parks 1952). Sociologists and geographers alike sought to connect, understand, and crystalize the relationship had between the economy (capitalism), cities, and the emergence of the so-called “urban phenomenon.” This phenomenon, during the second half of the twentieth century, was transformed. It then took on a new name: the so-called “Urban Question.” For those thinkers in the Chicago school, for example, the urban phenomenon focused on whether the urban was a result of ecological factors attributed to their understanding of the human experience, of human nature (Parks and Burgess 1921); market forces along side human competition (Parks 1936); higher density, competition, and mobility (Parks, Burgess, and McKenzie 1925, 42-67). At the forefront of this point of view was human ecology, as a first order concern. All other factors, higher population growth, density, economic competition, and mobility remained a second order concern. These factors, in other words, served as channels through which the emergence of human ecology could be
explained, and so too cities.

During the first few decades within the second half of that same century, the urban phenomenon took on a new definition, and thus new aspects. The so-called “Urban Question” moved away from human ecology, classical political economic point of view, and what Robert Parks (1936) calls “biologic economics,” and now towards a critical reexamination of the relationship between cities and capitalism, and how does that relationship both change capitalism and the city it exists within? This was now being done from an ever more radical, critical point of view. From this perspective, *homo-economicus*, the ideal presumption governing neo-classical economic thought, was no more. From this perspective, pure reason and so-called “progress” came into question. Experience, subjectivity, and aesthetics were invited once more back into the analytic. Language governing these analyses began to change. The city, this synthetic constitution comprising of both physical (buildings, institutions, people, movement, and so on) and immaterial (place, value, dwelling, and so on) attributes, took on new denominations: “collective consumption,” (Castells 1977) “urban morphogenesis,” (Vance 1990), and even “urban fabric” (Merrifield 2014). As time progressed, many thinkers took up their pens in order to make sense of such a peculiar phenomenon. Much has changed since then, however.

Thanks to such scholars, social activists, and to the dissemination of this phenomenon, scholarship regarding this topic has proliferated. To contribute to this existing scholarship, new inquiries, paradigms, and theoretical perspectives must be added to the existing scholarship. As a subject of inquiry, one in which has been given its own due, its own independency, transportation has often been left out of the dialogue. By this, something
particular is meant. It would be untrue to not acknowledge the fact transportation has been mentioned throughout nearly every study pertaining to the city or to make the reader presume transportation has not received its fair share of dedication. It would likewise be untrue to claim that scholars, for example like James Vance in his book *The Continuing City*, have not acknowledged and studied the importance of transportation and technological advances on urban form. Functions do not equate to structure, however. By its very definition, they are extensions intended to serve a purpose; they are mediums. So long as they are understood as functionary and at service to urban form, to human behavioral ecology, to *homo economicus*, transportation will remain within the class of second order concerns. But, if we elevate transportation to stand independent of the attributive position assigned to it, then the door opens for a rethinking of not only research, but also policy analysis. In order for this to arise, this thesis will argue that transportation needs to elevated from its secondary form into its first order form —all critiques to arise hereafter speak directly to this. It is through this objective that this thesis aims to construct policy analysis with transportation being a first order concern.

Beginning with the deregulatory laws of the 1970s-80s, deregulation in housing embodies the increase in land pricing, housing construction, price proliferation of deregulated commodities, and gentrification. Labor, on the other hand, refers to deindustrialization, the rise corporate financial jobs, media-based labor, software production (coding), and also to macro level wage-stagnation. Both foci are almost always interwoven with state/federal apparatuses or private corporate entities, as Manuel Castell argues in his
canonical *The Urban Question*. From our contemporary point of view, this macro level shift in both politics and economics is known as Neoliberalism; for Castells, however, this phenomenon was understood specifically as market logic piercing into urban governance and decentralization. Yet, while scholars have done their best to not only make sense of the madness of economic reason, all the while attempting to provide suggestions or recommendations for social change, still their focus on making sense of the urban phenomenon, in its totality, has remained idle. Again, one major component within city life is either mentioned briefly or almost completely ignored: transportation.

Transportation is a vital component of everyday urban life; it allows citizens to go to work, get into their city, and more generally, get to where they either need or want to go. Transportation systems not only intersect with other forms of urban life, but also are deeply intertwined with them. Taking New York City, a city trifled by Neoliberal economics and politics, and its MTA system as the case study, my larger thesis will argue that the MTA system (transportation) is acutely entwined in questions of labor and housing and the neoliberalization of both phenomena. More to the point: the MTA system not only assists in producing, but also reproducing gentrification, wage extraction, and overall intercity migration (white-flight and displacement, for example)—the move from Manhattan Island to the Brooklyn area is one very clear example of such phenomena at work. Yet, as the following literature will show, scholars have generally focused on the urban question without situating transportation as an equal to housing and labor.

Written in the midst of the 1970s, to go back to Castells, the urban question was initially a question of how the state managed, mediated, and intertwined itself in all forms of
urban life. Such an intertwining is known, as Castells identifies it as a welfare state. The state, for Castells, was the mediator of socialized goods and services, in addition to public goods as well; he called this relational phenomenon “collective consumption.” Collective consumption is thus “interconnection of actives relating to social individuals and collective appropriation of the productions” (Castells 1977, 126). Examples of such appropriated goods are as follows: housing, schools, hospitals, mass transit, and other public amenities. Additionally, though Castells lumps together the collective appropriation of the social goods, he still gives some thoughtful recognition to transportation. Transportation is one spatial form, which dictates the movement of urban life. Thus, without the widening of the transportation systems (highways, metro-stops, bike lanes) the functioning of the city will be utterly crippled, since, for example, workers will not be able to get to work. Castells writes:

Transportation has often been regarded as the agent of new urban forms: thus, the motorcar is seen as the cause of the megalopolis, just as the tram was seen as the basis of the large industrial urban areas, while the helicopter and moving footpaths are seen as prefiguring the ‘cities of tomorrow (Castells 1977, 191).

Though short and brief, Castells reflects and compliments his grander point, due to the fact that transportation systems were created and regulated by the state. Class conflict was then always on the horizon. The state, to codify its power, must mediate between such ideological, political, and economic laws: in order to control class and social struggle, by dissolving them, diffusing them, displacing or absorbing them. By doing so, the state is intervening in the foundational contradiction within capitalism: the contradiction between labor and capital. As the state endorses more and more welfare initiatives and regulation, theoretically, a belief emerges. With the deterrence of what Freud (1930) called “civilization and its discontent,” the state used welfare initiatives, as Castells theorized, to quarrel any and or all need to
protest or revolt. Transportation, as an extension of the state, as an item within the secondary order, served as a function to quarrel class dissatisfaction.

Nearly 42 years after the publication of Castells’s *Urban Question*, much had changed in the structure of capitalism. Incorporating these shifts, Andy Merrifield revisits the urban question in his book, *The New Urban Question*, in an attempt to reformulate Castells’s original claim. Merrifield’s aims to showcase how the once formidable ruling power, i.e. the social welfare state, was replaced by “ruling elites pioneering this process divest from collective consumption budgets; they actively dispossess former items of collection consumption as well, like public utilities and public infrastructure” (Castells 1977, 18). As noted, Merrifield is therefore arguing that a neoliberal decentralized ruling elite is now the mediators between cities and capitalism. Unfortunately, due to the nature of this book, Merrifield, unlike Castells, does not go into much empirical analysis of such public goods, like transportation; however, what little empirical analysis he does provide is in regard to housing. And of what he does write is more on the level of generality, rather than on some level of specificity. By way of focusing on general trends, Merrifield, like Castells before him, bundles public utilities into a singular category; yet unlike Castells, Merrifield asserts that these *public* goods have been transformed into forms of rent seeking.1 In other words, the collective consumption, i.e the components that give way to the reproduction of capitalism, “is achieved through financialization and dispossession, through dispossession and reconfiguration of urban space” (Castells 1977, 18). To use his own words:

Neo-Haussmannization would be impossible to imagine if land hadn’t taken on the

---

1 Rent seeking, a term used by economists refers to a company, an individual or an organization that obtains economic gain from others “without reciprocating any benefits to society through wealth creation. “Rent-Seeking.” Investopedia. 2016. [http://www.investopedia.com/terms/r/rentseeking.asp](http://www.investopedia.com/terms/r/rentseeking.asp).
pure character of [deregulation on capital], had it not assumed he status of interest bearing [rent], circulating through the property market, enhancing the value of land, redeveloping and upscaling that land for “higher” and “better” [prices] (Castells 1977, 23).

Adding onto Merrifield’s scope of analysis, Peter Marcuse and David Madden, in their book *In Defense of Housing*, focus their attention on housing. Through their theoretical understanding of capitalism, complimented by their empirical research, both authors argue that housing needs to be seen within the political dimension. By political dimension, they mean the commodification of housing was no mere accident; rather, “the residential is political – which is to say that the shape of the housing system is always the outcome of struggles between different groups and classes” (Madden and Marcuse 2016, 4). “The commodification of housing,” they argue, “means that a structure function as real estate takes precedence over its usefulness as a place to life” (Madden and Marcuse 2016, 17). For this reason cities, like New York, are being attacked, and dominated by the commodification of housing, i.e. by real estate. Notwithstanding, real estate and neoliberal policies do not work alone, “the state is still deeply involved throughout the housing system” (Madden and Marcuse 2016, 31). The state, the federal government and local government, but also privately contracted institutions assist in crafting legislation that will target minorities into debt, which will lead to evictions. Madden and Marcuse note, “home mortgages were transformed from an industry dominated by local lending, thirists and pass book accounts to one dominated by global corporate banking and securities” (Madden and Marcuse 2016, 32). Thus, real estate, state/national legislation, and a growing neoliberal class, lie at the helm of power. That is to say: Madden and Marcuse utterly agree with Merrifield's claim to the new urban question: that a neoliberal class lies at the center between cities and capitalism. It is by
no surprise Marcus and Madden focus only on the relationship between labor and wages, i.e. the means by which one pays for housing, and the price of housing (real estate) itself. While Madden and Marcuse analysis highlights the inner tensions between housing and labor, still their analysis only provides generalities of the politics assisting in the perpetuation of neoliberal policy. In terms of the urban fabric, its one thing to merely state Neoliberal politics at the planning level, and another to show the entwinement of politics, housing, labor, and the city more broadly through a geographic point of view.

To fill the gap left by the aforementioned scholars, Rachel Weber, in her article, “Extracting Value from the City: Neoliberalism and Urban development,” argues that “spatial policies, such as urban renewal funding for slum clearances or contemporary financial incentives, depend on discursive practices that stigmatize properties target for demolition and redevelopment” (Weber 2002, 519). Taking cities as her geographic medium, especially New York City, Weber directs the reader to her material base: value, crystalized in building form. Following the teachings of the Marxist Geographer, David Harvey, Weber asserts that the ground, on which such constructs are built, contains a paradox, an inner contradiction. On the one hand, real estate invests in an “alienable commodity whose association with a particular location makes it scarce and valuable” (Weber 2002, 521). Owner of said buildings are legally allowed to capture “any socially produced increases in ground rent plus the value of the improvements” (Weber 2002, 521). Additionally, “if returns from rents and future sales are sufficient,” she writes, “to pay off the initial developments costs and also meet fees and time horizons of creditors and investors,” new cycles of investments are therefore set into motion (Weber 2002, 521). While real estate
investment leads to large sums of profits, the process to such an eventuality is slow. The money therefore is trapped, or as the author phrases, “immobilized for long periods of time,” for the profit, the surplus value, is crystalized in its commodity form (Weber 2002, 521). Thus, it is unable to turn-over at a speed quick enough for capitalists to realize the profits. This ultimately results in detachments “from real estate’s attractiveness as an investment instrument” (Weber 2002, 521). This is to say, while on the one hand, real estate investment yields large sums of profits, it also, on the other hand, cements value for extended periods of time, thus making the investment less attractive.

Moving from the internal contradictions of one structure, one point, to the topological relationship governing the in-between between two or more structures, Weber focuses on the relationship between the state and real estate value. While the neoclassical model determines price, due to the mechanics of supply and demand, Weber instead postulates that capitalists “rely heavily on the determinations made by communities of technical experts…appraisers, market analysts” (Weber 2002, 523). Yet, she continues to write, “speculation, luck, political influence, and class resistance also conspire to transform the process of value creation and destruction into one of intense sociopolitical struggle” (Weber 2002, 523). Furthermore, while capitalists utilize differing strands of insight, the biggest source of assistance takes shape “within each locale, a lattice of state and non-state institutions…influence value in the built environment” (Weber 2002, 523). Between the state’s ability to intervene and deregulatory laws allowing real estate to capitalize on their investments, state actors construct and “mystify their politics by calling them something they are not, or try to conceal them (e.g. by making them administrative, not political, issues)” (Weber 2002, 524).
Blight, a medical term meaning “a disease that causes vegetation to discolor, was arrogated to the urban landscape, and now referencing physically deteriorated buildings or particular urbanite environments” (Weber 2002, 526). In order for real estate to maximize on cheap land and speculate on the value to be had, “federal and local officials crafted standards of urban rebuilding that were drafted into the law” (Weber 2002, 526). These laws, originating from the mid 20th century, permitted urban renewal to pulverize inner cities, while funneling “billions of deferral dollars into costly downtown commercial projects, highways, and sanitized streetcars,” all in the name of a public purpose (Weber 2002, 528). Poor areas of cities ultimately became gentrified; the use value of the housing commodity was now permitted only to those who could afford the price. As Weber’s scholarship demonstrates, a dialectical materialist method of analyzing geographic space showcases not only the internal contradictions of economic concepts, but also systems within contradictory relationships to one another. What proceeds is uneven geographical development, the accumulation of surplus value (profits) for the few, consummation of class power and alliances, –especially between the state and capitalists, – and finally the robbing of the use value from those who need it. For neoclassical economists, such features of the economy are neither emphasized, nor explainable, from the Marxist point of view.

As demonstrated by Weber, the very nature of and the focus on cities changed (the urban question), and so too has the urban fabric. This metamorphosis has led Marxist geographers to tackle the urban question in a number of new and inventive ways. Conceptually, one such avenue taken has been to represent cities as a singular entity in order to “jump scales” (Smith 1992, 61) and one other such method has been to concentrate on
“social reproduction.”

Coined by the Marxist geographer Neil Smith, “jumping scale” suggests both a movement in terms of distance, and so too in scope. Prior to Smith, scale was understood mathematically. Its positionality and therein-fixed nature stemmed from the proportions, the ratio, governing it. But, for Smith, to move from the local to the regional scale, and even from the national to the global scale (Smith 1992, 68), jumping scales facilities multilateral and synthetic form of analysis between different hierarchical altitudes. These altitudes were not permanent mathematical constructions, but rather socially constructed. Value stemmed not from the currency of the ratio or mathematical projection, but rather from the unevenness of social production, reproduction, valorization, and distribution. In order to move beyond the relativist tendencies of scholars and formal mathematical conceptualization, Smith ventured to make sense of scale by way of examining the changing and uneven terrain of the social (1984). For Smith, the social is entwined directly with the dominant economic mode of production: capital accumulation, from its centralized form born from its 19th and 20th Century industrial constitution to its current decentralized structure.

In both his articles, *Contours of Spatialized Politics: Homeless Vehicles and the Production of Geographic Scale* and *New Globalization* (1992), *New Urbanism: Gentrification as Global Urban Strategy* (2002), Smith presents the power of jumping scales in both an academically and stylistically rigorous manner: whether it be from the scale of the body, as mediated through homeless vehicles to the scale of global gentrification, or from New York’s regional scale to the global scale. In terms of the relationship between cities and capitalism, “jumping scales” functions well to make sense of the post-industrial
decentralization of capitalist structures, while changing the language of oppression and forms of resistance function to highlight differing ways to produce resistant and, at the same time, generate new so-called discourses on the matter at hand. But still, Smith’s efforts are predicated on a visible methodological leap.

The city, the urban, the urban question, and the urban fabric all are taken as something given. As an object for inquiry, the city is transformed into a subsumption; it becomes represented as one singular whole, a numerical unit addressed by its factual elements, rather than a complex totality, a phenomenon—and it is without surprise that the focus of such scholarship still remains on topical issues concerning geographers: housing, those who are exploited (labor), or the grey area in between. This is all to say that the city as a phenomenon, as a totality, for better or for worse, becomes reduced to its ontic properties. Such a point is not to dispel, critique, or squander Smith’s work. If anything, Smith’s efforts should be understood as a welcomed edition to this body of literature. But this point is one worth acknowledging. The formulation, this formulaic transformation of the city, effectively holds the potentiality to reduce the city in its entirety. As one jumps up scales any inquiry into the urban fabric, for example, is sublimated to the authority of scale and to the subject under investigation—in Smith’s case gentrification. For Smith, the ability to jump up and down scales is what allows scholars to engage with the micro, the macro, and the levels in between on a political level. This inner dialectic does permit ample access into the structures of capitalism. But in terms of the city, jumping scale must inherently leave, sacrifice, and reduce it, in order to almost universalize the ethos of the condition of the issue, —again in Smith’s case, it is gentrification. If this point holds truth, then for Smith to universalize
gentrification and the urban phenomenon, he must leave the city behind. In doing so, the city becomes presumed not only as a totality represented by a singular unit, but also all potentialities to understand the complexities of the urban fabric, and the making of such a quill, becomes immediately closed off. But, when jumping down a scale, Smith then loses the universal in order to find the particular, the city. This movement between the global and the regional, between the public and the private spheres, between the whole, as a unity, and the particular, is what Hegel (1807) referred to as the “unhappy consciousness”. Like jumping between scales, the unhappy consciousness can never find peace, for it must always lose itself in order to find itself. For this reason, it remains unhappy. Methodologically speaking, it is only when we find the city, and therein by losing the global, that the entwinement between jumping scale and transportation geography appears potent. At the scale of the city, labor, housing, and transportation are open to investigation. It is only when jumping up a scale that the city becomes a closed entity, and so the urban and global phenomena are accessible. But what good is that if the structure of transportation is still not understood, and if it is out of sight in terms of being an object of inquiry? This therefore means that unless an adequate analysis of transportation’s role within the urban fabric is outlined, the city will remain an incomplete object closed off for analysis when jumping up a scale.

Now, moving down two scales, from the global to the national, and finally from the national to the regional, we may here move into social reproduction. Due to David Harvey’s lectures, literature, and reengagement with the volumes of *Capital*, scholars across all disciplines have begun to return to Marx. Historically, the academy began and ended their
Marx journey with the completion of their readings of volume 1 and sometimes volume 3. Volume 1 commits itself to revealing the dialectical structures within production and production process of value in an industrialized capitalist economy. Traditionally, scholars inspired by Marx devoted their work to exposing subject matters pertaining to alienation, exploitation, tensions between working class and ruling class, and so forth. Subjects pertaining to projection took to the fore (primary concern), while interest and ideas regarding reproduction fell to the level of secondary concerns. In his later volumes, Marx, however, takes on different assumptions and points of views to understand the totality that is capitalism: volume 2 gravitates around with the topic of realization of value, while volume 3 investigates all forms of the distribution of value. While volume 2 is often seen as the driest and most inaccessible version of all the volumes, David Harvey’s scholarship and lectures on Capital turned that all around. Instead of focusing on only the production process, Marxist scholarship has only recently started to interact with the realities of reproduction, and realization. This offered specialists new conceptual access, tools, and ultimately new objects for inquiry. With the exception of Castells, Harvey’s influence spans and intersects with all the authors hitherto.

Having found inspiration in this work on social reproduction, Cindi Katz intends to show in her article, *Excavating the Hidden City of Social Reproduction*, “the notion of a hidden city of social reproduction, suggests that the uneven relations and material practices of social reproduction are respectively hidden and targeted by a neo-liberal agenda” (Katz 1998, 37). By taking the Grand Central Partnership, a private-public corporation cooperating with the city of New York, as the object of her analysis, Katz aims to make “the relationship
between the visible city of production and circulation and the invisible city of social reproduction” visible (Katz 1998, 38). Here, invisible carries particularly special signification.

But the question arises: what does she mean by invisible? The answer can be communicated as such: all stories tell a point of view, and it is through and by that point of view in which facts are organized and communicated. Whether conscious or not, all stories must cipher through the unimportant and important. Often, it is through these cerebral processes that these facts find their inclusion or exclusion from the story. Scientific inquiries and discourses are but two examples that facilitate this implicit happening. As such, to cast illumination onto that which has been separated out, i.e. the invisible components of social reproduction, is the very task Katz sets out for herself.

Similar to the aforementioned authors portrayed prior, Katz also highlights the class alliances between “the municipal government of New York, the Partnership…and financed by a large [Neoliberal] Business Improvement District centered on Grand Central” (Katz 1998, 38). Such an alliance forged to “deter further corporate flight from Manhattan, and to revitalize midtown in ways that would draw new forms of investment and bring middle- and upper-class visitors –local and not— back to New York (Katz 1998, 38). The Grand Central Partnership thus represented the ethos of Neoliberal globalized capitalism. To use Katz’s own words:

The stunning renovation of Grand Central Station as much as anything else in New York marks a landscape of power that both hides and hounds away the uneven relations and material practices of social reproduction that enable and produce the contemporary urban landscape of "globalized" capitalism (Katz 1998, 39).
By social reproduction, Katz here is not directly directing the reader’s gaze to the processes occurring outside of the realm of production. Within the context of her piece, she here is referring to the Grand Central Partnership’s so-called “ethical” answer to the homeless question.

To designate something as a so-called “question” is an interesting articulation of thought. From a scientific point of view, the very declaration of calling something a so-called “question” presumes a rationalization of a very specific order. This rational not only implores an answer, but also an apparent solution. With the problem (question) stated, an objective can be thrown ahead of itself. What remains is the method (progress) to connect the problem with its objective (solution). In this vein, the housing question, the Jewish question, the immigrant question, and the homeless question all assume these categories can all be rationally solved, from this scientific point of view. In the Western tradition, rationalization has come to reduced individuals to the factual properties that assign such persons to said categories. They become condensed to their ontic form, to their atomic elements, and calculated. Etymologically, in order for one to calculate, from the noun calculus in Latin, one had to originally utilize pebbles. Pebbles represented things in space and made them countable; they denoted and represented indivisible particles (atomos in Ancient Greek) constituting the foundation for their calculation. This permitted a new type of thinking: thinking by way of hypothetical guessing based on the facts already known and known prior. Computational thought crystalizes. To calculate, and to compute, all postulate themselves from so-called “logical thinking.” Modern economics found its tower of Babel in numerical thought, and so too did any form of solving these so-called questions.
As Katz notes, the homeless were “problematic in this scenario insofar as they were objects…and not as subjects, that is, people who might have been made jobless as a result of the shift in the city’s employment structure from manufacturing to finance…” (Katz 1998, 39-40). Here, the homeless experience is to be understood as that which is invisible. Moreover, she describes, “homelessness was a problem in midtown because homeless people were depressing at best and menacing pests at worst” (Katz 1998, 40). What ensued was the employment of homeless people. But what actually occurred was that the “Grand Central Partnership employed people to harass homeless people away from the Distract, beat homeless participants… and employed homes people at sub-minimum wages” (Katz 1998, 40). Just as Grand Central Station sought to construct a new image of itself, it also sought to displace all those who did not fit its new persona.

In the pursuit of capital accumulation, Katz illustrates the collateral damage inherent within all Neoliberal projects through the realities of the Grand Central Partnership. Subsequently, social reproduction, the social qualities and structures that allow capitalist production process to yield its outputs, has long been the missing half to the capitalist equation. This should be taken in a twofold manner: on the one hand, outputs should be understood in terms of commodities, and on the other hand, outputs point toward the social inequalities, poverty, and class repression for example. Leaving out reproduction processes, and in this case social reproduction, is to miss 50% of this reality. While Katz is illusive in her definition of social reproduction, a definition can thus be conjured: for Katz, social reproduction generally refers to all components allowing capitalist production to continue; and, more specifically, social reproduction refers to the structures and activities that transmit
inequality. In the case of the homeless, their presence not only highlights that capitalism is either working as it should, or in a crisis—ultimately indicating homelessness as an effect and needed mechanism to further (re)production,—but, at the same time, points towards how social reproduction can be assimilated into production processes in order to further reproduce social inequalities on larger scales.

As the image of the urban fabric showcases more and more complex set of patterns, colors, and overall complexities, the concept of (social) reproduction becomes another welcomed feature of analysis—even if the concept was almost entirely neglected since the publication of volume 2 in 1885. In terms of production and social reproduction, Katz’s analysis focuses on the relationship between Grand Central Station (real-estate), public-private coordination (the state), and exploitation (labor). In terms of production and (social) reproduction more broadly, transportation appears to be the central link connected the said relationships. In terms of real estate, Grand Central’s functions as a terminal point for individuals to either access or leave New York City. In Neoliberal terms, it is a commodity in and of itself. This is also not to mention that transportation and land prices have a direct correlation, insofar as value of land rises; in terms of labor, it transports the labor commodity to work, where it can be realized, and, at the same time, consumers to markets, i.e. production and reproduction. While the scope of Katz’s analysis does not need to incorporate transportation into her analysis, still her pieces, like those already mentioned, primarily stresses important on the relationship between labor and real estate. Though Katz’s article comes closest to touching upon transportation, due only to the subject matter, the productive and reproductive aspect of transportation, and how it plays into the Grand Central
Partnerships, remains hidden.

Generally, as shown by way the examples of Castells, Merrifield, and Marcuse and Madden, Weber, Smith, and Katz, Marxist scholars primarily concerned themselves with the study of two major categories interwoven with the urban phenomenon: housing (real-estate) and labor. Each author, in his or her own way, highlights the complexity of the urban fabric, its changing nature, and how it changes with accordance to differing scales. Despite the angle taken to analyze the structure, all authors are missing one major ingredient: transportation and its structure. Now, before one can write and describe structures, it is important to acknowledge a phenomenon’s appearance. Just as Castells, Merrifield, and Marcuse all acknowledge and attempt to make sense of the historical shifts in housing and labor, their claims are formed on a presumption: historical time. This is to say that to acknowledge an evolution of a historical concept is merely to recognize historical transformation, to recognize becoming. Thereby to understand a phenomenon, to pierce beyond it to understand its structure, to understand its Being, one must understand its structure, and how the structure has developed through time. All the aforementioned authors presume this datum, for it not only connects them with a Marxian vision of the world, but it also necessitation for a dialectical materialistic analysis.

Terms are, however, useless if not defined or made plain. “Dialectical materialism,” to use David Harvey’s words, “is not a doctrine arbitrarily foisted on phenomena to interpret their meaning, but a method that seeks to identify the transformation rules through which society is restricted (Harvey 1973, 290).” This method, as Harvey notes, takes into account, “separate structures exist within a totality and that these structures can be differentiated from
each other” (Harvey 1973, 290). Such structures are therefore defined systems of internal relations, “which is in the process of being structured through the operation of its own transformation (Harvey 1973, 290).” Since material concepts contain internal relations, — for example a commodity holding within it the contradiction of use and exchange value, — dialectical materialism “distinguishes between contradictions within a structure and contradictions between structures (Harvey 1973, 291).” Ultimately, each structure and the contradictions both within and without are in the background of a historical epoch.

Space and time, geography and history, these are two separate halves complimenting the same whole. In order to realize a space-time analysis, not only associated with post-structuralism or post-modern thought, but also rather drawing from the science of history itself, macro- and micro-political economy is necessary. Between the macro and micro, scale emerges. It becomes a binding force to mend space and time together: macro in the sense of larger (national) structural changes, and micro in the sense of regional and everyday changes that emerge from institutions, people, and the economic environment. Or to use the language set forth by David Harvey: one must understand the inner contradictions within a system, and then the emerging contradictions between systems. This is not only true of a materialist analysis, but also true of utilizing differing academic disciplines, such as geography and history, in order to illustrate the complexities of this aweing fabric.

Now in terms of temporality, scholars such as the labor historian Joshua Freeman, whose books *American Empire* and *Working Class New York*, will function as both a pretext and context to situating the historical becoming of not only New York City and its transportation system, but also to provide a rigorous historical based assessment of both New
York City and the eventual MTA. Also, this thesis will utilize the work of the late Judith Stein, a historian of political economy, whose book *Pivotal Decade: How the United States Traded Factories for Finance in the Seventies* also aims to inform the macro-micro dichotomy of scale. Finally, the historical work done by David Harvey’s *A Brief History of Neoliberalism*, will also inform my work on the larger structural changes that occurred within the contemporary history of capitalism.

In terms of micro-history, unfortunately, very little has been written on the history of New York City’s subway formation. As of 2004, the historian Clifton Hood, whose book *722 Miles: The Building of The Subways and How They Transformed New York*, aims to fix this gap in literature. While his book focuses on the NYC subway system from its inception to the 1950s, it does so through the recording of the complex negotiations between planners, politicians, powerbrokers, and the changing economic and political environment. Through this lens, Hood utilizes a vast array of city newspaper articles, private writings of officials, and documents published by private and public governmental and transportation institutions to highlight how “the subway integrated New York geographically, overcoming its river barriers and joining for of its five boroughs together. It shaped the development of many city neighborhoods” (Hood 2002, 12). By and large, without the subway, Hood argues, neighborhoods would have developed independently of one another. There would have not been a collective New York experience, no New York State of mind. But is story not incomplete? Two critique may be raised: one the one hand, Hood’s scholarship only focuses on the first half of the eventual MTA’s embryotic stage, and, on the other hand, it primarily focuses on the political actors and institutions. The book inherently focuses on a top down
To complement Hood’s book, Andrew Sparberg’s 2015 book, *From a Nickel to a Token*, seeks to complete the story of the MTA. Though Sparberg’s initial training was in transportation planning, he eventually became a transportation scholar, and the chronicler of NYC’s transportation history. Since he is not a trained historian in the traditional sense, Sparberg’s book acknowledged that his book is not a comprehensive history like Hoods. Instead of focusing on a top down history, however, his book “is an examination of twenty specific events in the history of New York’s mass transit system during the 1940-1968 period, bookended by the subway unification and the MTA’s creation” (Sparberg, 2016, ix). Across the 20 events outlined in the book, Sparberg accesses the multilateral debates, strikes, and conversations amongst various groups, people, and institutions. His approach not only allows for a top down history, but also a bottom up. This thematic choice permits Sparberg to provide an interwoven and multi-angular history, both in terms of incorporating groups, people, and institutions emerging from grass roots politics, but also insofar as noting the complex relationships that transformed the subway system on all scales, so to speak.

Though Hood and Sparberg both illustrate the history of the NYC subway system, and highlight the politics of transportation, both primarily focus on transportation as both a medium to refer to the changing political climate of NYC, and as a medium to note the transformation of the subway system in order to represent the cause-effect relationship between governmental institutions and their shaping of everyday New York life. All in all, the story gravitates around an anthropocentric narrative. This is not so much a critique, as it is an important point to acknowledge. While human agency plays a vital role in the becoming
of the NYC subway, a question of structure can be asked. For if one envisages the subway system as merely a medium, then the continuation of its alienation in academia and conceptual thinking shall remain. One must therefore ask what the subway indicates towards. For this is the structure of all signs: it refers to something; it represents something; and it indicates something. To inquiry upon the subway’s indication is not only to ask what the internal structures are, the internal contradictions, within the material edifice. And it is also to ask what the internal contradictions between structures are, between housing and labor for example. This is not only inherent within dialectical materialism, but also foundational to Heidegger’s phenomenology.

In approaching the question of structure, of indication, entwining urban planning and transportation scholarship is essential. Its quintessential constitution has not only been identified prior to the publication of Castell’s *The Urban Question*, but also had been maturely conceptualized by the mid 1970s. The missing link between the urban fabric and transportation’s role in it lie herein. To begin with the more contemporary piece: in his 2008 book, *Human Transit*, the urban planner, Jarrett Walker, sets out to outline the challenges, issues, trade-offs, and negotiations surrounding the planning process. His main focus, however, is not only showcase how cities can not only improve and conceptualize their own transportation systems, but how planners can redirect their transit medium of choice: from the car to the train, for example. In terms of subway, Walker’s fourth chapter is most helpful, for it covers the relationship and tension between ridership and coverage goals. In terms of New York City’s history and the history of the eventual MTA, coverage and ridership goals play a large role throughout —even if it was not mentioned by name. Ridership goal, simply
put, refers to how institutional forces determine and deploy where, when, and how many transit carriages will be deployed. They function off a market system, so demand follows where there is the most supply. Coverage goal, however, aims to provide service for all. Here a tension emerges: on the one hand, giving to areas in need based upon a supply-demand model, and providing access for all. On the one hand, this tension, this contradiction, this inner dialectic of the deployment of transportation, is directly in tune with the grounding work of Marxists: i.e. Karl Marx’s writings in *Das Kapital*. What Adam Smith first coined in 1776, as relative value and exchange value, to which Marx would later clearly define as use vs. exchange value, is at the core dialectic of all commodities. (In terms of transit, the question therefore becomes not only who has access to the commodity, but also who has the right to the city.) With regards to the discourse of urban planning, ridership goals is exchange value, and coverage goal is use value. But this use-exchange value dialectic does not end there. For the concept of access still needs to be explored.

First published two years before Castells work, the urban planners and transportation experts K. H. Schaeffer, and Elliott Sclar, in their book *Access for All: Transportation and Urban Growth*, argue that the formation of cities could not have been possible without transportation. It is clear that their scholarship is certainly out of date both in terms of content and historical evidence and claims. But, their overall claim, the very title of their book: access for all, is still relevant. Already in the mid 1970s, Sclar and Schaeffer fully understood the problem of the automobile, and how planners designed cities. Planners were designing cities based upon the ridership model. This standard is otherwise known as a mobile-centric model: to place importance on movement of people or freight; it is measured and judged by
speed capacity, and efficiency, is mobility. Yet for Sclar and Schaeffer’s the need to move people out of the car and into public transportation was not only important in terms of accessibility to and from places, but they noted that the car had and still has damaging effects upon the environment. To use their own words, “access is what cities are all about. Man invented cities as an economic and social tool to create easy accessibility through collocation” (Schaeffer & Sclar, 1980, 5). However, access to cities and market goods were not the only concepts Scalar and Schaeffer had in mind. Access to housing was another important category. The relationship between housing, transportation, and the value of land, are all phenomena that urban planners have been dealing with, while Marxists were still solely focused on the factory and labor. Still, though urban planners have focused on the relationship between the rise in housing value (real estate and the land itself), due to the emergence of subway terminals, they have ultimately remained blind the realities of labor and wages. They assumed human agents and laborers to merely be homo economicus —this naturally assumed away women, and thus fifty percent of the world. Just as Marxists and historians remained blind to the realities of scholarship of urban planners, urban planners remained just as blind.

Between Walker, Sclar, and Schaeffer’s work, urban planners have both historically and consistently have placed such concepts at the foreground of the work. In the history of NYC and the MTA, all such concepts remained hidden and passive. To understand the structure of transportation, concepts such as use and exchange, such as ridership and coverage goals, such as a mobile centric and access centric model, must all be brought into a dialectical discussion. Through this entwinement, through this discussion, through a process
of rigorous analytical interrogation and negations, the nature of transportation can be *grounded*. Without a strong, sturdy, and stable base, these three distinct systems (housing, labor, and transportation) will remain fragmented. In order to bridge the distinct disciplines of history, geography, and urban planning, a conceptual framing and grounding is needed for transportation, labor, and housing. Each highlights not only its production process of value, but also its own realization and distribution of it. It is in this way that a totality of the urban fabric can been dialectically grasped. But some questions nevertheless arise: how will this be done? What empirical methods will be used? How do dialectics play into this? What are the assumptions built into a dialectical analysis? And why should dialectics be the chosen as the driving force of this piece? To answer such questions, we must cast off the yoke of the literature review, for both the analytic, presumptions, ethos, and writing style of this chapter will prove to be ineffective when attempting to answer the aforementioned questions. To gain access into the molecular, into the given assumptions built into this piece, we must now change both our approach and objective. We must now move from the literature review into the methodology section, for it is there that we will find the answers we so seek.
1.2 Methodology: From an Intertext to a Pretext

With the conclusion of the literature review, our terrain gains one more layer of complexity and serenity. And, at the same time, it comes one step closer to unconcealment. By unconcealment, a meaning and a presumption are exposed. That which remains covered from sight, is now exposed in full view. This presumes that that which has been covered up or cased out of sight has always been. But what is this thing that keeps appearing textologically: i.e. as a demonstrative pronoun (that which)? The answer: truth. Truth resides all over and, for whatever reason, remains obscured. Nevertheless, it remains. To inquire into the reasons as to why truth remains concealed before one’s gaze would derail the point of the foregoing chapter. However, while universal truth is not task of this piece, the term unconcealment still offers use. In invoking the term, a certain rapport brings itself forth, and something new materializes.

Between the literature review and this passive consideration of the term unconcealment, the previous chapter set forth to showcase that transportation is that which has always been there but obscured or never seen — a second order concern not yet made primary. Through the faculty to bring a dialogue forth, the two main object of inquiry for the Marxist tradition has been between housing/real-estate and labor. By offering each author the benefit of the doubt, by attempting to engage with each author and each work through their own assumptions and paradigms, we positioned ourselves at the core of such texts in order to transcend them. Each endeavor provided insight into both what was being said, and what was being assumed away. This process thereby informed a conceptual dialogue, therein
metabolically transforming it, and then, when materialized into its written form, brought forth a dialectical analysis; for the Ancient Greeks, dialogue and dialectic were one in the same; they even share the same etymological root. By weaving through each work, by way of the very ethos of linear writing, a causal layering ensued. From within the Marxian universe, we saw the existing paradigms, assumptions, triumphs, and shortcomings of each work. But like all excavation, one can only go so far down, before one must return to the surface, find a new spot, and begin the process anew. In this renewal process, layering becomes a nexus; a nexus of deposits reassembles itself into a web like net. This web like net can be called a network. To refer back to David Harvey’s explanation of the power of a dialectical analysis, it is a system of thought that aims to make sense of the contradictions within an object, and between objects. From layering to network construction, dialectics has always intrinsically had this ability. But on this subject, there is more on this to come.

Moving between systems, our excavation repositioned us. A new ditch was uncovered. In it we unearthed the setting, the history, and the framework to recognize the formation and transformation of the NYC’s transportation system. We now found ourselves in history and the historical discipline itself. There, the need to apprehend macro and micro changes was fulfilled: to understand the political economy of small-scale structural forces of say the United States as a nation, and the forces governing the large-scale New York City area. It is through the geographic concept of scale that a full picture of both New York City and its transportation system could be illustrated. But just as the move from Marxism to history was needed, again another system, and so too the establishment of a wider network, was needed.
So far, transportation was left out of the equation, assumed away, or only factually explained through time. Yet, to recognize transportation’s structure, its functionality, and how it is used, conceived, and understood, we had to leave the newest portion of our newest point in our network, and set out to create another. And so we did: we then found ourselves immersed in the discourse of urban planning: from time to space. This new ditch of urban planning served to provide factual support to the functionality of the subway, but also of its structure within urban planning and markets. While digging, while attempting to reach the core of the matter, we attained an interrelated, entwined, and interwoven matrix expressing complex patterns, relationships, and imagery. At this point, transportation’s function and structure began to somewhat reveal itself. A transformation occurred: from a thing existing on the terrain of the everyday to an object of “scientific” observation. This latest assembled form could be called a concept. Up until this point, the summary of the literature established an intertext, which ultimately functioned as a pretext for what is to come.

From seeing transportation as something working within its everydayness, as something ready-to-hand, to seeing it as object of an analytical and scientific gaze, present-to-hand in Heidegger’s terminology, our sight has thus been renewed. Initially our investigation began through mere observation: we identified that something was missing. And so, an intertext was established. A term developed into its own and became a concept: an abstract model grasped mentally. And so, seeing turned into beholding. In beholding, we seize upon the fixed object in abstraction. There, one begins to inspect thoroughly. In the Western tradition, this process of examination has interplay between the eye and the hand. Just as a clock maker takes apart a clock to understand how it works or the issue with it, the
Western tradition has a knack for this so-called scientific process. By taking the object apart, placing each segment side by side, while studying the relationships between the parts and the whole, one is then able to judge the functionality of the sum in order to grasp the whole. In German, this dynamic process is termed *Auseinandersetzung*, literally the placing (*-setzung*) of an object and taking out (*Aus-*) its parts and placing said parts beside one another (*-einander-*)]. The connotation carried by the term is one of confrontation. Because the very coming into contact with that which is estranged to oneself conjures interrogative statements, this dynamic process is to be understood as the very starting point for any scientific inquiry: objectivity, i.e. the activity by which one takes such an object, and makes it objective — something out there, — all in order to unconcealment that which was hidden: truth. Now, this pursuit, like all else, is predicated upon something. In this particular case, the presumption of such an action is grounded upon this object-subject dichotomy and, at the same time, an unquestionable so-called “objective” I.

The assumption of this unquestionable I and of this object-subject, but also mind and body, dichotomy lies at the heart of not only Cartesian philosophy, but all scientific inquiries. Here, a momentary need to reflect is important. To continue onward with the problems of Cartesian philosophy and modern science itself would not derail this chapter. The kernel, the unity between these two categories, is what this piece aims to question. In order to proceed forward, the link that connects these two objects must take center stage. The concept of logic must be put under a microscope of sorts. It will be by way of delving into logic, into the core of the matter, that we will find ourselves back into the methodological force that drives this piece onward, and so too the methods this piece will utilize. From an established intertext, a
pretext formed. Now, emerging out of this pretext, we find ourselves in this transformative motion yet again. Here a pretext turns into context, all in order to reach the very text itself.

Logic is the language of the universal. As of recent, the interchangeability between logic and reason is most uncanny. Logic is one form of reasoning, but not reasoning itself, for there are other categories of reasoning. According to its very definition, logic locates itself in the form a question, an interrogative statement. This linguistic expression requires either a yes or a no as its answer. It demands totality. Something either is, and is for all time, or it is not, and therefore of no concern to universality. On the plane of reality logic, like all concepts, survive, thrive, and exist in their models, in abstraction. In more theological terms, to gain access to the gates of heaven, one had to leave their tether to their material remains.

The divide between scientific abstract ideal and reality is stark. How can one reach such a place of milk and honey? Yes or no answers are structural binaries. And like all binaries, they are either a 0 or a 1.

This ability to grasp phenomena by calculation is what is known as computational thinking. This was not evident, however. For this type of thinking to move from claims expressed through sentences to be realized as mathematical expression is a result of time. As mathematical expressions, phenomena are forced into representational symbols, such as $E = mc^2$. In this form, representational expressions refer to the attributes of phenomena, and not to its very totality. From a philosophical point of view, the ontic can be grasped and not the ontological. In less philosophical terms, the attributes, characteristics, or factual properties that something holds can be represented. The entirety of the phenomenon cannot, however. To quickly summarize: we find that logic is a form of computational thinking; we
find that logic can only understand the world in terms of a binary of yes or no, 0 or 1 by way of forcing phenomena into models; we find that logic can only grasp the factual properties of phenomenon and not the totality of it; we can also see that the scientist is never put into question; and lastly, we find this form of reasoning alone, either by rationalistic or empirical methods, can grasp truth — the body, the material reality, remains secondary to this. While this may sound appealing, common-sensical, and true, reality itself tells of a different story, for reality is filled with contradictions. Something may be logically true, but utterly unsound.

In terms of this investigation into the form, function, and role of transportation, logic in this mathematical style will only provide us access into transit’s factual properties, and not its structure. The question then becomes: if we negate or parenthesis the computation quality of logic and the assumptions therein, then are we still dealing with logic? The answer: yes.

Dialectics is also a form of logic. For Hegel, it was the very science of working from the particular (real world contradictions) to the universal (the terrain of universals, the terrain of truth). By working through the inner contradiction of an object, the object itself arose to the world of the ideal (Aufheben). In our reference to the Geographer David Harvey, we learned of Marx’s dialectical process. But we did not delve into its core assumptions, like all before. It only seems fitting that here, in the methodology section, that an interrogation of the method guiding this piece should be put under question. So, the question becomes: what are the assumptions of dialectics, and what do they emerge out of?

To begin with the latter, dialectics, in Hegelian and Marxian terms, surfaces out of the very contradiction of so-called logic. It incorporates that which is (1) and that which is not (0), to arrive at the universal, for the two are mere divisions of the whole. On the former,
dialectics baseline assumptions have remained since its use in Ancient Greece. Dialectics began as a form of oral argumentation. As one person brought forth their point of view, another would retort. By bringing this counter-view the reality and limit of claims showcased itself. Claims usually are expressed as one idea. One idea per sentence is the limit. In the bringing forth of this point, one inherently must let go or not bring forth the remaining points. In order to bring forth multiple points, multiple sentences are needed. It was through this dialogue, this dialectic, that a medium could be found. Justice would prevail. For the Greeks, justice was conceived as equilibrium, rather than a triumph of good over evil. Equality was the key. In terms of the modern usage of logic, each claim functioned as a 1, as a truth. But by synthesizing both truths, a grander truth was reached. Though the idea of this term has changed much since Plato, dialectics has always been a method through which a form or universals could come forth out of contradictions, out of logical “yeses.” At the same time, nowhere in this method has one limited themselves to the numerical or algebraic attributes of reality. Phenomena can therefore be grasped, and so too can the facts. Dialectics allows for both realities.

To use Einstein’s beautiful equation as an example, logically one reads the proof from left to right. In terms of equality, in terms of justice, one finds that whatever was read prior to the equal sign is now equal to what will follow. E represents Kinetic energy, which equals the relative mass (m) of a body multiplied by the speed of light squared ($c^2$). Logically everything is sound and true. All that is needed are numerical values to be plugged in. While this equation may refer to a phenomenon in time and space as a model, its modular form functions represents places for numerical values to be plugged in. Mathematics and logic
therefore seem to be the only accessible ways to pierce this formula. But, dialectically, one may read the equation as such: mass has enjoyed, until currently, being defined as a universal concept of physics. It was a quality all physical bodies possessed, and also could be understood as a measure of resistance to acceleration. It was uniform, logically sound, and universal idea. Light too was conceived as uniform, logically sound, and universal, for it was understood as something that moved in a straight line. Because of these once prevailing ideas, the two concepts were once seen as distinct, as separate truths. The fact Einstein brought them together highlighted kinetic energy’s contradictory nature as conceived by the scientific community. Furthermore, it is through this equation that we see mass and energy are the same. Kinetic energy’s constitution is comprised of its logically contradictory elements. All forms of mass contain potent energy, just as all commodities contain use value, and at the same time exchange value. Energy cannot be destroyed; there is no logical beginning or end for it, despite what logicians claim. Rather, the process transforms it. Einstein diligently questioned the baseline assumptions of both classical physics and electromagnetism; he saw what appeared before him and what had been separated out. He then brought together two different systems into contact, two separate logical truths, and synthesized a dialogue between the two. Where one fell short, the other provided conceptual support. The theory of special relativity is very much so a dialectical process: truth found through contradictions but established in a model form. Furthermore, this process not only preserves the ontic qualities of the equation, while engaging with the dynamic and transformative process, but also utilizes the very contradictions within logic itself to grasp the ideal.
Having spent a great deal of time exploring dialectics, its baseline assumptions, its function, and its analytical, conceptual, and historical beginning, we are now finally in a position to change from methodology to method: the former referring to the dynamic force propelling this piece forward; the latter refers to the empirical tools to be utilized. And so, due to the nature of this investigation, due to the question this piece strives to answer, empirical methods and sources will be used. It can now be stated that since dialectics finds its origins in logical thinking, all empirical or rationalistic sources and/or arguments are therefore open to a dialectical analysis. Now, because we have outlined and expanded upon the assumptions given forth by this methodological choice, our context has become transfigured. Its figure, its form, has now moved from the context pertaining to methodological driving force directing this thesis to the empirical methods providing matter.
1.3 The Methods: Context

As context in its secondary form, each methodological tool plays its role to provide substance. This substance is nothing more than a collection of facts organized and conceived by and from the modern mind, and potentially mediated through a medium: a pen, a typewriter, a paintbrush. The process, by which we form information in something, is a gesture of aesthetic importance. Our ability to provide context, to use the terms of metaphysics, the matter to the form or even the essence to the structure, speaks to our aesthetic faculties being at service to our epistemology and ontology. The production and utilizing of facts aims to in-form; it aims to provide in-formation. In other words, it was by way of this joining together, this weaving together, or even this ability to join through the gesture of making that the Latin usage of the term, contextus, is preserved.

To realize and highlight the structure of transportation and its role within the urban question, contextual elements are vital. It is from these elements that we may build upward, until we reach its zenith. There, we will be able to unconceal its totality. To get there, steps must be taken. The first step: time. For how can one know of such a thing, such a being, if one is uninformed of its becoming, of its development and evolution through time? Like all things in it, transportation finds its beginnings in time; it is temporalized through it. This point is especially true for the recent addition of the 7-line. In order to understand how this project’s inception, what political and economic forces were at play, and what events led to its summation, understanding the 7-line’s circumstance temporally is essential. To do this, using archival sources functions best to set the scene. This piece utilizes both physical and digital newspaper archives from mostly the New York Times, as well as secondary historical
literature. In lieu of this, newspaper articles will not be my only source of historical information, for these are vast digital databases that contain historical documents from NYC, its planners, its politicians, and other newspaper archives etc.

As our illustration of the 7-line’s becoming commences towards the terrain leading to our contemporary moment in time, a switch from becoming into being takes command. In terms of being, in terms of space, the existing conditions of the 7-train are elemental before one is able to move into the nature of transportation itself. To highlight the factual properties and the current predicaments of the 7-line and the MTA more broadly, a different set of sources is needed. Data collection from the MTA, its historical records, its debt history and the corresponding figures, as well as open source data on subway ridership, watchdog organizations like the Citizen’s Budget Commission, urban planning design plans like the rezoning plans for the Hudson yard area, and censes data will all be utilized. In spite of the underlying economic assumptions built into this slew of sources, a dialectical analysis will again provide insight into the data and its relationship to contradictory nature of the working structures of capitalist economies.

Through these elemental constructions, the steps taken have positioned us to pose the following question: what is the nature of transportation and what is its structure? As posited in the following section, this question materializes in order to raise transportation out of its secondary class and into its primary. From a mathematical point of view, this question intends to transform a second order equation and turn it into a first order. To use the language

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2 It shall be noted here, however, that historically the Times was known as the golden standard of journalism; it was often first in publishing the big stories of its day and leading the standard for journalism. But, during the late 70s and 80s the times declined, their credibility crumbling. In other words, regardless of its golden standard or not, the Times, like all other newspaper sources (the Post, the New Yorker, and the
of metaphysics, this question intends to elevate “matter” and convert it into “form.” In either expression, to afford the nature of transportation aims a solid grounding, it must be raised as the subject of inquiry, so that it may co-exist alongside the concepts and phenomena of housing and labor. The main sources for this portion will take the literature and writings on transportation. In doing so, we move from the particular to the ideal, then back again to understand how time has influenced and brought certain contradictions forth and negated others.

With that said, the final portion of this paper will focus on possible policy analysis and recommendations to solve the urban question. After having treated transportation as something in its own right, then entwining it in a dialectical entanglement with labor and housing, the thesis aims to tether the city into a totality, into a fabric. As a fabric, this thesis will delve into possible alliances, possibly patterns that can be made, on the one hand. And, on the other hand, delve into possible suggestions for planners that can possibly move away from risky investments already being made. The suggestions and recommendations function to show how to design the city differently. The archetype of this section is admittedly more experimental than practical. Yet, at its core, such a forum allows for thinking these realities of labor, housing, and transportation in a dialectical manner. To do this, all previous sections will synchronize in conjunction with the funding methods to establish the 7-line train. By explaining such policy, its core assumptions, and the contradictions it perpetuates, experimental alternatives will be given. Such alternatives will be inspired, if not directly influenced by economic work done by the University of Massachusetts urban planning Economist) should not be taken at face value. A dialectical method will provide any and all analysis the aptitude to seek out that which has been separated.
From an intertext functioning as a pretext to context, we are almost at another point of metabolic transformation: from context to text. Before stepping into the following section, and therein concluding this chapter, some concluding points shall be made here. Transportation has predominantly remained a second order concern; it has been treated as a medium, or otherwise denominated as an empirical tool for scholars to further their major findings. The intertext portion of this piece strove to showcase this reality. As the intertext functioned as the pretext, the context portion of this chapter strove to outline and describe dialectics, and the methods utilized in this thesis. While the author of this piece has sought to describe dialectics in a vivid and digestible manner, this was done more to make the thinking understandable and conceivable. The reality of this thinking, as the following chapter will demonstrate is far more subtle. At its core, dialectics directs its attention towards assumptions and presumptions of that which is said, expressed, or shown. It insists upon showcasing the complexities, contradictions, and logical divisions that exist therein any given phenomena or concepts. At the scale of the phenomena, dialectics divides the whole to better understand the parts comprising its whole, in sensu diviso. It then moves up a scale to then comprise the phenomena or concept as a whole, in sensu composito. From there, dialectics aims to understand the topological relations, ratio, governing the phenomena, in sensu stricto. This is the fundamental working of a dialectical analysis. The aforementioned description of dialectics intended to make this analytic renderable, thus, in turn, imaginable.

Now, at lower level, methodology turned into methods. Methods concerned itself with the disciplines, tools, theoretical framework, and sources to be examined and used. At
the level of context, this portion of this chapter served to justify all the moves taken in my
thesis, while at the same time, highlighting any of my own shortcomings. With regard to the
latter, often critiques arise that pertain to interesting realities related to the subject in hand,
but often more than not try to create a bridge between that which has been separated and the
governing question. The question of Being, in terms of Human beings, has been left out of
this piece, so too has gender, and even intersectionality to mention a few examples. This has
not escaped the mind of the present author. Such critiques and fruitful topics do deserve a
place in this field of discussion. Unfortunately, due to the nature of this present work, the
current concern is with the urban question and the structure of transportation. It is clear that
the final section of this piece, where policy and possible recommendations, is the place for
such additions. Nevertheless, that is not the aim of this piece. The very act of constructing a
question both provides the limits and horizons possible. Here, the focal point is to raise
transportation into the level of primary concern. Therein by bringing forth transportation into
the field of first order concerns, a formal dialogical discussion with other first order concerns
is possible. This thesis is this thesis’s duty. Nothing more, nothing less.

After a long and technical undertaking, after having positioned all the necessary
elements in place, after constructing our network by weaving, intertwining, braiding, and
joined together all the needed elements together, we are now able cast aside all word forming
elements and prefixes and arrive at what will be the text to come. From the Latin textus to its
contemporary form “text,” an etymological preservation ensued.
1.4 On the 7-Line: The Text

In 2013, just days before leaving office, Michael Bloomberg rode the nearly finished No. 7 line located at 34th and 11th street. The trip was certainly not part of his daily commute, nor was it common for a sitting mayor to casually use public transportation, especially one that was not open to the public. His journey was instead a symbolic gesture; one meant to showcase the success of his administration, all the while marking the end of a long and challenging struggle to bring a major infrastructure project to completion. For Bloomberg, the completion of such a project costing around $2.4 billion meant a new chapter for the once-isolated Far West side of Manhattan (Fermino 2013). To use Bloomberg’s own words, “this was a historic event… [the extension] is yet another symbol of how New York City is a place where big projects can get done (Fermino 2013).”

Even though the completion of such a project is certainty a great feat, still some questions arise: why was the extension from the 42nd Street-Times Square station to the Hudson Yards station on 34th so important to the Bloomberg administration? How and why was this extension conceived? Where did $2.4 billion dollars emerge? To make sense of this project, this paper will first set out to outline the history and existing conditions of the No. 7, and, afterwards, provide theoretical considerations regarding “the nature of transpiration” in terms of access, mobility, and accessibility in conjunction with the inner dialectic of the subway between use and exchange value and between production and consumption. By way of establishing such a theoretical consideration, transportation moves out of the realm of secondary concern, and finally placed into the first order realm.

Thereafter, having emerged from the nature of transportation, this piece will then
extend itself into showcasing a dialectical consideration of transportation policy, as it will consider transportation’s relationship to labor and housing. For those working from the neoclassical paradigm, by entwining these three realities of the urban fabric, a multitude of institutional recommendations emerge to rejuvenate the Hudson Yards area that will not only benefit business, but New Yorkers more broadly. For those fighting for social justice in the realm of labor, right to the city, housing, and transportation, this paper is within the realm of also providing theoretical consideration to seeing labor, housing, and transportation activists in harmony with one another. This paper will not necessarily aim to provide radical suggestions in order to fundamentally change a city or its ethos. Rather, it will materialize objective goals for urban planners, city officials, or even these distinct groups to fight for. It can be said here that the entwinement of these groups will not only make for greater political alliances; it will also position these social activist groups to take larger steps towards their respective and group goals. Perhaps this thesis can show such a way.

Though the task ahead appears overly ambitious, the second half of the paper will focus on two-policy recommendation to fund housing and transportation: Transit Utility Fees and Joint Development projects. Despite the fact that these suggestions are unable to enact change, as the first portion of this paper will highlight, still considering alternative methods of funding is a vital point for not only policy makers, but also social activists. The entanglement and intertwining of transportation, housing, and wages, this paper aims to ultimately present a method of renewal that is not necessarily market-oriented. To breath life into a city, this does not solely mean exponential economic growth is the way. Access, use, and affordability are the alternatives.
Chapter 2.0: History and Existing Conditions

While the inception for the 7-line expansion only materialized in 2005, the extension itself has its origins in the 1970s. Even when going back to the 1970s, the goal for such an expansion remained the same: move midtown business to the Far West side in order to expand the circumference of the business sector; and at the same time to allow market forces to yield economic prosperity for not only businesses, but also for New Yorkers, and the future population of said area.

Before delving into the history of this extension, and to what eventually led to the No. 7 line expansion, it is first important to highlight the micro and macro historical landscape of the 1960s and 1970s. Only by underlying the historical climate of the 1960s and 1970s will the political debates and economic stresses surrounding the New York City subway expansion take on their full significance. With the end of the Second World War, America’s global power emerged as direct result of how the nation chose to “use its incredible wealth and power to shape the world and reshape itself” (Freeman 2012, 24). By the 1960s, however, things began to change. The Liberal machine, the same one that brought America out of the Second World War, was breaking down. Growing political fragmentation was on the rise, so too were riots and political movements, and a change of economic paradigm leading to disinvestment in government funded projects at the state and federal level, as well as a shift from industrial production to service jobs (Stein 2011). This was in fact the “Pivotal Decade” (Stein 2011).

For the everyday American, prices for commodities rose in the late 1960s. As of 1968, rising prices “combined with low (though rising) unemployment and widespread
politicization, kept labor strife at a high level through the mid-1970s” (Freeman 2012, 247). With New York standing at the forefront of the Liberal Welfare state model, New Yorkers, especially unionized workers, “demanded pay and benefit increases and greater respect from both management and union leaders” (Freeman 2012, 247). In order to maintain congruency between labor, public goods, and housing, for example, New York City utilized the demand-side economics, also known as the Keynesian method, by increasing government expenditures into public works and reducing interests rates; through these mechanisms, government would create the effective demand needed in order to stimulate the economy. In turn, this would not only provide workers with higher ages, so that there would be higher consumption, but also make sure governmental agencies would circulate funds into public works, e.g. providing citizens with work and wages. But, with the decline of manufacturing and the migration of white middle-class families out to the suburbs, for example, New York City utilized bonds, i.e. debt, to compensate for the changing economy.

New York City, during the mid-1970s, accumulated an ever-growing debt, due to the selling of municipal bonds. To put figures on the debt, as the historian Joshua Freeman describes, “by mid-1974 the city had a debt of $11 billion, including $3.4 billion in short-term notes. Over 11 percent of city spending went to debt service” (Freeman 2012, 256). Consequently, even just to keep its doors open from day to day, New York City needed to keep borrowing money, and further their debt. With respect to bonds, the city reduced denominations of the smallest municipal notes from $25,000 to $10,000 in order to accumulate funds and stimulate some type of growth; in turn to stimulate sales, underwriters kept pushing up interest rates (Freeman 2012, 257). New York City was on the verge of
bankruptcy and collapse. To counter the rising stagnation, New York City planners called for a plan of action.

In December of 1970, planners proposed a major infrastructural plan to invigorate economic activity, as well as bettering transportation services. In the *New York Times* article, “6th and Last Part of Master Plan on City,” the Times journalist, Michael Stern, outlined key features the plan addressed: the commission’s desire to protect financial firms, the uncleanness as to how much the plan will cost, the infrastructural problems within the boroughs, and finally housing redevelopment (Stern, 1970). “Among the major proposals for Manhattan,” wrote the journalist, “detailed in the volume was a plan to deflect westward the course of midtown office building” (Stern 1970, 1). He then goes on to write, “the new construction would parallel a new crosstown mass transit line under 48th Street (Stern 1970, 1).” From both sides of 48th street to Eleventh and Twelfth Avenue, this portion of the city highlighted a dead zone in terms of business establishments, due to the absence of a subway line. Because redevelopment of the area would lead to speculation, yielding “rise in property values,” hotels, apartments, buildings, shopping, and cultural centers, the revitalization of this area represented a public good (Stern 1970, 1). Not only were these developments to benefit new travelers, argued the planners, but also in part the newly refurbished area would primarily serve New Yorkers, rather than solely benefitting private developers (Stern 1970, 1). Moreover, the midtown plan proposed “the whole of the area west of either Avenue between 40th and 59th Streets, with housing in the blocks north of 48th Street spine and commercial development in the blocks to the south” (Stern 1970, 2).
being the nexus intersecting and synchronizing these processes to possibly rejuvenate the overall economy. In a statement provided by the chairman of the commission, he stated, “Manhattan is the financial and cultural heart of the nation and the core of our city. To strengthen it is to strengthen all the boroughs. To ignore it could kill the goose that lays ‘the golden eggs’” (Stern 1970, 2).

On the 5th of October 1971, only ten months after the proposal made headlines, the chairman of the MTA, Dr. William J. Ronan, insisted that unless Governor Rockefeller issued 2.5 billion in transportation bonds, not only were infrastructure plans going to be halted, but subway fares were to rise by 5 cents (Prial 1971). What is more: just months before, in March of that same year, the Times published an article stating that the funds Rockefeller received from the federal government in 1967 had all but dried out. “The $2.5 billion bond issue approved by the voters in 1967 is just about dried up, the Governor said, with virtually all of the funds either spent or already marked for specific project” (Farrell 1971). Without bonds, and if the Legislature could not come to a decision regarding bonds and the budget, then New York City was without funds for any new projects. This also meant that existing developments must cease and desist (Farrell 1971).

Nearly one month after the chairman of the MTA called for Rockefeller to apply for bonds, state officials met to discuss the halting of certain highway constructions. In the end, Rockefeller was right. Since the state rejected the $2.5 billion bond issue, major infrastructural plans ceased. The $400 million dollars in bonds intended “to rehabilitate the existing subway and commuter rail lines,” were now out of the question (Witkin 1971). Not only was the expansion to the West 40s and 50s proposal no longer available, but also new
east-west transit line across 48th Street and the lower end of Manhattan Island, and an extension of the Long Island Railroad (Witkin 1971). As the 1970s came to an end, New York City was no longer the same. “The fiscal crisis constituted” Freeman notes, “a critical moment in the history of privatization, spreading the belief that the market could better serve the public than the government” (Freeman 2000, 272). Due to President Ford’s decision to not bail out New York City, the State of New York stepped in. The state’s decision to help bail out the city meant drastic changes to the structure of New York City. That also meant structural changes for the MTA system: one lasting effect of such structural changes resulted in the rising price of the subway fare, just as the Dr. Ronan argued.

Operations could only continue if monies were acquiesced from other origins: from commuters themselves and from the selling of bonds (debt). Every 10 years or so post-1970s, the price for a single subway rides rose by fifty cents, as shown by Graph 1. With an annual ridership of about 1.757 billion riders, rising costs was just one major method that the MTA compensated and keeps compensating for its diminishing funds (MTA). In terms of bonds and debt finance, it too has been accumulating. According to the Citizens Budget Commission, “a nonpartisan, nonprofit civic organization whose mission is to achieve constructive change in the finances and services of New York City and New York State government,” debt services were, and continue to be, highly diversified (CBCNY). While Graph 2 exhibits the diverse nature of NYC debt, it also showcases its exponential growth. From 2002 to 2012, debt visually more than doubled; as of 2016, New York City’s debt reached around $112 billion dollars (Doullis 2017).
Graph 1:

Source: Business Insider.

Graph 2: NYC Debt Outstanding

Defining the legend: “GO - General Obligation debt is backed by the full faith and credit of the City of New York. It is used to fund the bulk of the City's capital projects and is backed by City tax dollars; TFA - The New York City Transitional Finance Authority was created in 1997 to finance a portion of the capital plan. TFA debt is backed by the personal income tax and has an even better rating than GO debt; TFA BARBs - TFA Building Aid Revenue Bonds finance school construction and are backed by State building aid; MWFA - The Municipal Water Finance Authority was created in 1985 to fund sewer and water capital construction projects. Its bonds are backed by dedicated water and sewer fees; HYIC - Hudson Yards Infrastructure Development Corporation bonds are used to fund the extension of the 7 line and other development within the Hudson Yards Financing District; MAC/STARC - The Municipal Assistance Corporation was created during the 1970s fiscal crisis as an alternative debt vehicle to the City's GO bonds. In 2005 the remaining debt was refinanced with debt issued by the Sales Tax Asset Receivable Corporation. Debt service on STARC bonds is paid by dedicated state sales tax revenues; TSASC - The Tobacco Settlement Asset Securitization Corporation securitized revenues from a 1998 settlement with the cigarette industry; ECF - The New York City Educational Construction Fund issues bonds to finance construction and renovation of schools, often in combined occupancy arrangements; Conduit debt - This includes older debt issued by a state authority for hospitals and courts and debt issued by the New York City Industrial Development Corporation for private and nonprofit agencies with the goal of fostering economic benefits.”

Source: Citizens Budget Commission of New York.3
As the 1980s commenced well into the 1990s and beyond, New York City planners looked for a third option outside of raising fares and issuing bonds. They, instead, directed their attention to the rising and very profitable financial corporations. Planners saw these international corporations as possible investors for their projects; in 1993, Department of City Planning published their proposal, titled “Shaping the City.” Planners argued that an improvement in access to the Manhattan Central Business District would benefit both the financial district located downtown and its investors. Yet, the investment, ultimately, was not there (DCP). Even though the plans for the extension were ultimately unsuccessful, New York planners, the MTA, and city officials saw a new opportunity on the horizon: the bidding for the Olympic games.

In 2005, New York City officials and planners made a bid for the Olympics. According to Mitchell Ross, the director of Transportation Policy and Management at NYU, the bid for the 2012 Olympics played a large role in two respects: rezoning the Hudson Yards area and providing a plan for the 7-line extension. The Olympic games functioned as a possible method to stimulate growth in the Far West side. “From the beginning,” Moss notes, “[the] city administration aimed not simply to build Olympic facilities on the Far West Side, but also to spur development of the entire area” (Ross 2011, 24). The growth generated, however, had not met the desired expectations. Before the actual bid itself could be made, the City’s administrators understood a plan for rezoning the Far West Side was needed. Plans to extend the 7-line thus took shape. The project itself was 1.5 miles long. The 7-line plan

extended from the Times Square, under 41st Street to Eleventh Avenue, then curved south running to 11th Avenue to 33rd Street. The station, if constructed, would provide “easy access to the planned development over the rail yards and to the Javits Center” (Ross 2011, 28). In its official bid for the 2012 Olympics, New York proposed an “OCOG [(Organized Committee for the Olympic Games)] budget, with revenue and expenditure at approximately USD 3 billion” (International Olympics Committee 2005, 32). This also included “capital investments of USD 276.6 million for sports facilities” (International Olympics Committee 2005, 32). “Despite the proposal of the budget,” as Ross states, “the MTA capital budget was already under great pressure, especially for the Second Avenue subway and East Side Access projects, each still needed billions of dollars and years for completion” (Ross 2011, 24-27). With a lack of funds and a collected debt of $67, 830 billion (Graph 2), the MTA was in no position to fund the 7-line extension project or the Olympics in 2005 (Ross 2011, 27). In the end, London won the bid for the 2012 Olympics. Yet, in spite of the overall loss, Bloomberg, as one Times journalist wrote, “won the rezoning effort in 2005, with plans for up to 24 million square feet of office space and more than 13,000 apartments” (Bagli 2011).

Two years later, Bloomberg finally announced the No. 7-line extension. Through the union of his administration, the City Council, and the Hudson Yards Redevelopment project, the Hudson Yards Infrastructure Corporation (HYIC) was created. Its purpose was to manage and to finance the 7-line extension, new parks and other infrastructural projects (Loeser and Gallagher 2007). According to the Hudson Yards Master Plan, every city functions “to provide space for jobs, housing, and recreation” to both stimulate and maintain economic growth,” even in the midst of New York City’s “economic slowdown” (HYMP 2003, 3). To
facilitate this program, “growth in office and convention space is critical to meet the changing needs of businesses and to accommodate an expanding economy” (HYMP 2003, 1). Because the Hudson Yards experienced little economic growth or investment throughout the previous decades, due to the absence of a subway station, the area west of 10th Avenue between 29th and 40th street “is occupied by open parking and utility storages” (HYMP 2003, 5). Additionally, fewer than 150 housing units exist within this area (HYMP 2003, 5).

Map title: Hudson Yard Area

Source: Open Street Map

In order to stimulate an economic upturn, planners focused their attention towards the
Javits Center — given its status as the 15th largest facility in North America, and host to a multitude of cultural events and shows. The 7-line extension was thought to “increase [the Javits Center’s] competitiveness in the convention industry,” and would ultimately “attract more tourists and jobs” to the area, while “ensuring New York’s economic strength” (HYMP 2003, 4). Having the Javits Center as its focal point, planners also focused on constructing new residential and commercial cites, creating open spaces, i.e. a park, which would begin at 30th street between 10th and 11th Avenue and ending at around 40th street, and finally building with sustainability in mind; the Hudson Yards “smart” design attempted to integrate energy and water conservation, “intelligent response to microclimate, waste minimization and recycling, ecology and public open space within a comprehensive sustainable development framework” (HYMP 2003, 14-24). Graph 3 provides an extensive illustration of the key parts of the project: while the key features of the Hudson Yards project are present, the idea of moving Madison square garden was only on the table for a short period of time as part of the Olympic bid.
Map:

Source: "NO. 7 SUBWAY EXTENSION-HUDSON YARDS REZONING AND DEVELOPMENT PROGRAM". City of New York, 16. 
To realize such a project, Mayor Bloomberg had to secure access to the needed funds. He did this by way of two major methods: TIF and PILOT programs. As New York City’s overall debt was on the rise in conjunction with rising subway fares, in 2005, Mayor Bloomberg sold “$2 billion worth of bonds, then [set] aside all property-tax revenue from new construction on and around the site to repay the subway debt — a procedure known as tax-increment financing, or TIF” (Demause 2015). TIF is a public financing method producing subsidies for infrastructure, community-improvement projects, and even urban redevelopment programs. TIF strategy anticipates future earnings from real estate taxes. Those forecasted earning are then placed into allocation funds for improving one’s district, like fixing sidewalks, and it sets limit on how much those developers will have to pay in taxes (Weber 2002). Because the 7-line extension is a public improvement project, developers, such as Goldman Sachs or Tishman Speyer, for example, do not pay, or at the very least they do pay a smaller percentage of real estate tax. The thinking is that the eventual revenue captured from such developers will then in turn be redirected to pay off the bonds issued (debt). TIF districts generally last from 20 to 25 years.

Payments in lieu of taxes (PILOT) programs were also utilized. According to Real Transit, PILOT programs are set to be one of the largest sources of revenue:

Under a PILOT arrangement, the New York City Industrial Development Agency (“NYIDA”) would purchase the land to be developed from a developer for a nominal amount, which would in turn relieve the developer from paying traditional property taxes. Thereafter, over the course of the next 30 years, the developer would pay a determined price per square foot to the NYIDA, who would then transfer those proceeds to the HYIC [(Hudson Yard Infrastructural Corporation)]. At the end of the 30 years, the property would be sold back to the developer for a nominal price and the developer would resume paying normal property taxes (RealTransit).
By way of TIF and PILOT programs, in conjunction with providing developers tax breaks, amongst other funding methods, as represented in the legend of Graph 3, the Bloomberg administration forged ahead (Demause 2015).

Only two years after Bloomberg took the 7-line as a symbolic gesture, the No. 7 extension was finally open to the public. According to the most recent data regarding subway ridership, the No. 7 ridership is on the rise. In the mere two years it has been open, the 7-line’s ridership increased by 118.184%, as noted in Graph 4. Although the spike in ridership is impressive, it pales in comparison to other stops located on the 7-line, as shown by Graphs 4 & 5. Yet, if an adequate comparison on ridership is to be had, then an adequate and quantifiable ratio must exist between that which exists to the left and right of this so-called scale. Equality is to govern. But like any scale, to compare one thing to another, a common denominator must be found, matched, and equitable. Luckily, given that this thesis is about the nature of transportation, it is clear that the unit providing and ensuring equality is that of subway ridership. And yet, when looking upon Graph 4 and 5, either with the greatest attention or even by a simply “glazing over,” the dramatic difference between the 34th and Hudson Yards is evident. To make a meaningful comparison, not only must the units align, but so too must the sheer magnitude pertaining to the quantity of riders. For these reasons, juxtaposing the L-train will function better than comparing the Hudson Yard terminal with various stations along the 7-Line.

4 The Percent difference formula was used to find the percent difference between the total number of riders from 2016 (2,691,851) and the total number of riders from 2015 (692,165).
Map title: 7-line Subway Routes  
Source: MTA
Graph 3:

34 Hudson Yards 7-Line Ridership

Source data: NYC Mass Transit Spatial Layers.
https://www.baruch.cuny.edu/confluence/display/geoportal/NYC+Mass+Transit+Spatial+Layers
Graph 4:

Subway Stops located on the 7-Line In Manhattan

<table>
<thead>
<tr>
<th>Route</th>
<th>7</th>
<th>BDFM7</th>
<th>S4567</th>
<th>NQRWS1237ACE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>34 St-Hudson Yards</td>
<td>42 St-Bryant Pk/5 Av</td>
<td>Grand Central-42 St</td>
<td>Times Sq-42 St /42 St</td>
</tr>
</tbody>
</table>

Ridership

Source data: NYC Mass Transit Spatial Layers.
https://www.baruch.cuny.edu/confluence/display/geoportal/NYC+Mass+Transit+Spatial+Layers
Graph 5:

Source data: NYC Mass Transit Spatial Layers.
https://www.baruch.cuny.edu/confluence/display/geoportal/NYC+Mass+Transit+Spatial+Layers
Both based on overall ridership and service, the 7 and the L lines are quite similar. Much like the 7-line stations within Manhattan, the L-line hosts one of the busiest terminals in all of Manhattan: 14th Street and Union. Though none of the stops located on the L-line can compete with stops located at Time Square and Penn Station, the L-line heavily parallels the 7-line, when one leaves Manhattan Island. Nevertheless, the Hudson Yard terminal can best be compared to the 1st and 3rd avenue L-line terminals. Much like the Hudson yard extension, the 1st and 3rd are amongst the least populated stop on the L. This comparative claim is both true within the Manhattan parameters, and also true when one heads outside of it. These two locations on the L-line are particularly interesting. Both terminals are located by two important points of access: the 14th Street/Union terminal, and access into Brooklyn. It should be noted in passing that the 7-line could only, however, relate to the former and not the latter of the previous observation. Additionally, the 1st and 3rd Avenue terminals are on the border between the East Village area and Stuyvesant Town, where medium income is around $80,000 per year. Notoriously exclusive and expensive, an argument can be made that these L-line terminals absorb ridership both coming from within and from outside Manhattan. And in fact, both based upon relative locations and functions, i.e. aiming to absorb so-called booming areas, the Hudson Yards extension and these two stops are theoretically similar—assuming of course the Hudson Yard line will fulfill the forecasted promise bequeathed to it. According to Graph 6 the Hudson Yards line has already within its second year caught up to the 3rd Avenue’s ridership by 242,459 passengers. Yet, in comparison to 1st avenue ridership, the Hudson Yard line still needs some time to catch up.
It is clear that the Hudson Yards project is still in its embryotic stage: the Hudson Yards area is still currently under construction, and the area is filled with more construction workers than tourists. Ultimately, the data itself on ridership still is too early to point towards the type of rider absorption that planners from the 1970s onward hoped for. Notwithstanding the fact that the expansion of a subway line was a historic event, it is still too early to determine the results and effects of the Hudson Yard- 7-line expansion; and at the same time,
if it will turn out to be similar or better than the 1st and 3rd Avenue terminals.
Chapter 3.0: On The Nature of Transportation

Now, in order to proceed further and provide an adequate policy analysis and possible recommendations, I must borrow and expand upon themes already discussed. As already explored upon in great detail, for urban planners, governmental representatives, and transit authorities, the 7-line’s function was to not only relocate mid-town business to the Hudson Yard area; it also operated to stimulate economic growth within this otherwise isolated area and for New Yorkers more broadly. This strand of thought remained constant, despite the progression of time and despite the illusive nature of economic boom and busts. Implicit within this constant is a crucial assumption. Throughout the history of the No. 7 extension, it is assumed that if market forces are either directed or allowed to proliferate, then a trickle-down effect will occur. In order to stimulate growth, economic prosperity or the revitalization of an area, the focus needs to be on business, business friendly contracts, and legislation, for example. By doing so, the areas will ultimately benefit, so it was argued: not only the businesses and their workers, but also the geographic area more broadly. To put it succinctly: those working out of the neoclassical paradigm focus on the mechanism of the market, as the medium to best stimulate growth and urban renewal. In reality, this vision of the world has only yielded gentrification, growing income inequality, and services and utility for those who have the means (Katz 1998; Smith 2002; Weber 2002; Harvey 2005; Piketty 2014; Merrifield 2014; Marcuse and Madden 2016; Schram and Pavlovskaya 2018). Perhaps a bottom up approach is needed.

3.1 Access

“Access is what cities are all about. Man invented cities as an economic and social
tool to create easy accessibility through collocation,” writes the Professor of Urban Planning, Eliot Skalar, and urban planner K.H Schaeffer (Schaeffer and Sclar 1980, 5). Already within these two clauses, Schaefer and Skalar’s thesis and vision of the world emerge. In order to adequately understand the two claims posed, definitions are required. What is Access? What is Mobility? What is Accessibility? These three questions have concerned the urban planning community for decades (Hansen 1959; Koenig 1974; Davidson 1977; Hansan 2002; Littman 2003; Handy 2012).

For urban planners, *access is defined as the capacity to enter and exit a transport system* (Littman 2003); whether it be heavy rail, car, bike, metro, or even an airplane. Here already, access addresses economic and spatial dimensions and realities of everyday life. In the former, the presumption built into the idea of access is that, firstly, modes are able to be used; and nevertheless, whether or not one has the ability to use every mode, one has, secondly, the funds to perform a transaction to gain access to the mode –buying a car or buying a metro card, for example; and thirdly, and probably most obvious of them all, there are terminals to be accessed.

In regard to the latter, one can say the following: dependent upon urban design, historical processes, one’s income, and where one resides, whether it be in Long Island or Manhattan, access to modes of transportation will vary starkly. Not only does the choice of mode vary in terms of access, be it to drive to work or walk twenty minutes to the subway terminal and use public transportation, but also the terms of *mobility*. Now, if indeed these are the three main take-aways from access (access into terminal, spatial access into a mode, and economic access for a mode usage), then in terms of entry, access refers to the ability to
move within a transit system. That is to say, one moves from one spatial schema into another. Access alone cannot facilitate the trip. Mobility is discernibly essential. And so, what remains is access’s antithesis: mobility.

3.2 Mobility

*That which functions as the movement of people or freight, which is judged by speed capacity, and efficiency, is mobility* (Littman 2003). Judged by empirical markers (speed, capacity, and efficiency) public transit bears two goals, as the transit consultant Jarretty Walker notes: “service [to all] parts of the community” and maximize ridership with [a] fixed service budget” (Walker 2014, 118). From the institutional point of view, providing and maximizing mobility is crucial. In spite of this, a contradiction arises for transit organizations. In his book *Human Transit*, Walker makes plain that agencies set out to provide service for everyone, and to provide mobility for all, on the one hand. This is known as a Coverage goal; regardless of how people use it, transit is there to serve. On the other hand, however, standing diametrically opposed to Coverage goal is Ridership Goal. As Walker states “[Ridership Goal] calls for deploying service the way private businesses would, with the aim of the highest possible ridership for a given service budget” (Walker 2014, 118). With the distribution and usage of services comes the replenishment of operating costs. Implicit within the process of replenishment is a “farebox recover.” This is the “percentage of operating costs recovered by fares” (Walker 2014, 118). But, what does this mean in terms economic and spatial access, from the rider’s point of view? Without shying away from such a question Walker writes the following:

This means in “areas where demand is high, the Ridership Goal provides very intense service. But in places where demand will always be low, an agency pursuing the
Ridership Goal would offer no service at all, just as a competitive airline will not fly into towns that are too small to fill its planes (Walker 2014, 119).

In terms of an analysis, the block quote above needs no explanation. Nevertheless, an observation can be made. As a public good, transportation, like all other commodities, reveals an inherent contradiction. For the private person stepping into the public sphere, i.e. public transportation, access reflects the utility, the use. Yet, at the same time maximizing ridership per trip through the revitalization of operating costs by fares reflects market mechanisms and overall exchange – from the relative perspective of so-called public agencies. Moving from the relative to a more bird’s eye view, public utilization of transportation constantly battles between use for use’s sake, and market realities of exchange. In other words, the public implementation of transit exists between use and exchange value.

3.3 Accessibility

Having begun with access, and then moved into its antithesis, mobility, we arrive at a subsumption. The categorical term used to qualify the tension between access and mobility is, as Schaefer and Skalar noted, accessibility. Accessibility is the measure of capacity for a location to be reached or to reach different locations. It is therefore by no surprise that the colloquial phrase, “location, location, location,” expresses a great truth. Where wants, needs, and desires intersect and materialize, there will be accessibility. Here, an interesting relationship showcases itself. As Schaeffer and Skalar make clear, cities function as mediums to bring social and economic realities together. Emerging out of this amalgamation is accessibility. Cities were designed to provide accessibility. Through collocation, through the literally act of placing things side by side, transportation aims to compress geographically
distant locations through time. This industrialization of space and time, as the German Historian Wolfgang Schivelbusch coined the phrase, is essential to this collocation (Schivelbusch 2014). But, if transportation functions as the movement between things placed side by side, then the question becomes: what are these things standing beside one another? The immediate answer is the two relative access points, the beginning and the end of one’s journey. Working within the abstract language provided, the exiting access point is not an end in itself, but rather a means to an end. That is to say, one uses public transportation as a means to get to work, to shop, to meet friends, etc. Between all the aforementioned activates, location and place remain the constant. Beyond the mystifying realm of Euclidean geometry and its abstract quadrant-based language, “access points,” location, and place reflect the contradictory real world structures, the ones standing side by side. Now, it is often true that colloquial phrases contain great truths in of themselves. If this is true, then the phrase “location, location, location,” should be no different. The phrase typically refers to the placing of a business. From the economist’s point of view, better locations yield better outcomes, higher profits; less desired locations yield worse, less desirable outcomes, fewer profits. In terms of accessibility, the phrase therefore, not only refers to the accessibility of and to the train or subway stations, on the individual level; but also, it references riders’ accessibility to locations and places that hold those wants, needs, and desires. In the history of the Hudson Yards expansion, the 7-line extension was the precursor to such necessities. Hence, for the economist, land use, transportation, and also wages are intertwined in terms of accessibility.

Holistically, so far, the nature and functionality of transportation have been discussed.
In the history to the 7-line extension, the reality of access, mobility, and accessibility, and the relationship between land use and transportation, have not only clearly appeared, but also developed with a specific design: to move midtown businesses to the Hudson Yards area in order to stimulate economic activity for the area, and also New Yorkers more generally. This argument for urban rejuvenation, for the revitalization of economic activity, speaks to two separate yet interwoven realities in space and time: production and consumption. In order to further explore this reality, I must borrow from a concept developed earlier: use and exchange value (Marx 1992).

Contained within all commodities is the contradiction between use and an exchange value. The former speaks to usefulness of a thing and consumption, whether it be food stuffs or materials to be used in the production process. Exchange value signifies a product’s metabolic transformation into a commodity and therefore referring to market value. From this understanding, a question can be posed: is the subway a commodity like all others? The question itself becomes complicated, because the subway is not a commodity to be owned, but one to be used. Transit and the subway are public goods. The question therefore becomes: what is this idea of “public?”

The historical development of this concept called “the public” is in fact quite rich, and yet also rather quite complex. Nevertheless, a definition is in order (Habermas 1991, 1-26). In one sense of the term the Public refers to “the sphere of private people [coming] together as a public” (Habermas 1991, 27). Soon those in the Public, as the Marxist sociologist, philosopher, and historian Jürgen Habermas tells, “claimed the public sphere regulated from above [and] against the public authorities themselves, to engage them in a
debate over the general rules governing relations in the basically privatized but publically relevant sphere” (Habermas 1991, 27). This Public is, however, very different from public with a lowercase, i.e. the one under investigation. In its capital form, the Public carries forth a dichromatic form, one in which can be demarcated in two ways. The first refers to legality and land qualification. Simply put, while land may be owned by private persons, the demarcated place functions to facilitate public interaction. There is simply no better place than a drink between friends; bars and cafés are but two examples. For the Ancient Greeks, while bars and cafés were not yet in existence, the agora embodied this Public quality, from the contemporary point of view. And for the Latins, this was the forum.

This distinction, this division, between the concept of public and private, both in terms of legal property rights and the spheres between the two, arose into maturity with the modern bureaucratic state (Habermas 1991, Shapin 1996, Woloch 2012). The “public” emerged. To use the language of the times, “the first man who, having enclosed a piece of land, thought of saying ‘This is mine’ and found people simple enough to believe him, was the true founder of civil society” (Rousseau 1984, 109). For the “public” in public transportation here refers to those working for or under the state, i.e. that which enclosed a piece of land and declared it theirs (Neff and Dickens 2016). All of this is to point out that the obvious: “the public” in public transportation refers to those who work for the state. It is the state that decides, as already noted in Ridership Goal, how to best distribute trains, the allocation of funding, and pricing and manage operations more generally. Thus, in turn, two points materialize. First, public transportation is a commodity, but it is not one to be owned by private individuals. Second, the decisions made by the state, whether good or bad, will
directly affect the Public, and public transit. Now even though the subway is commodity, even though no private person can own it, we are now in a position to claim that the value of the trip itself is identified as the commodity itself. This service is therefore the true commodity.

Existing between the contradiction of use and exchange value, between coverage and ridership goals, the service of the subway also exists between the production and consumption process. “The services’ (the change of place), are necessarily consumed the moment they are produced,” as Karl Marx wrote in his second volume of Capital (Marx 1992, 135). He continues by noting “what the transport industry sells is the actual change of place itself. The useful effect produced is inseparably connected with transport process, i.e. the production process specific to the transport industry” (Marx 1992, 135). From one point of view, this production process is itself the spatial movement of the means of transport. From a realization point of view, from the point of view of circulation, this movement is the very commodity being consumed. And so Marx explains, “the useful effect can only be consumed during the production process, [i.e. the ride itself]; it does not exist as a thing to use distinct from this process, a thing which functions as an article of commerce and circulates as a commodity only after its production” (Marx 1992, 135). While the exchange value is determined by market forces, “ridership goals,” transit functions twofold: for an individual, the use value of the ride vanishes with its consumption; for transit based in the production processes, it is itself functioning as another stage in the production process.

In the Grundrisse, Marx yet again refers to transportation. “This locational movement” Marx writes, “–the bringing of the product to market, which is a necessary
condition of its circulation, except when the point of production is itself a market—could more precisely be regarded as the transformation of the product into a commodity” (Marx, 1973, 534). Because he was addressing the industrial epoch of his time in the *Grundrisse* and *Capital Vol. II*, Marx concentrated on transportation in terms of heavy rail. This is not so much a critique, as it is a point to be made. Since Marx’s time, not only the nature of the epoch changed from industrial capital to finance capital, but also the nature of the inquiry. Meaning, the focus here is on the nature of transportation in terms of a subway system. Heavy rail and transportation rail have thus split. The MTA system is not like that of rail freight transport. The former transports citizens, while the latter, historically, transported mainly products, and also people. If Marx is correct in his analysis, then one must ask what commodity the subway system circulates. In terms of work, in terms of the production process itself, the answer is the labor commodity: workers. The subway system is used to provide accessibility: placing the consumer and the market side-by-side or joining individuals with leisure-based activities. Production, on the one hand, and a consumable commodity, on the other, these facets are material realities contributing to the multifaceted nature of transportation. Though consumption and production processes are mediated and crystalized, in this instance, within the same medium, they nevertheless occur and are enacted across two different places in space and time (Marx, 1973, 92-93). In terms of the production process, would this therefore not mean that this travel time, would, in turn, contribute to the overall value of labor? Are labor concerns therefore not the same as transportation concerns? Now while traditional products turn into commodities when they enter the market, the labor commodity is different. With traditional, material commodities,
their final form detaches itself from the processes that brought it into existence. The buyer of said product perceives of the object as something before them, as it is for what it is. Meaning: for some reason or another, they are, to use the Marxian vernacular, alienated from seeing the totality of the processes bringing something into materialization. But for the labor commodity, when a person enters the market place, they simply do not lose their local identity; discrimination, economic inequality, and religion and so forth are not unseen as the person steps into work. Labor concerns are transportation concerns.

Within the literature of geography and, historically, within the discipline of economic thought, there is a strong correlation within the literature between transportation and labor. In 1956, the scholar Robert Buting published a small piece in the Southern Economic Journal to highlight the relationship between commuting and wage-relatedness (Buting 1956). In his piece, Buting notes that commuting and wages have a direct correlation, one in which has not been given the empirical a deserves with respect to the function it performs in interrelating structures of local labor” (Buting 1956, 370). Many of the ideas located within this piece - commute time, bargaining power, accessibility, the relationship between housing and labor, - have been taken on, challenge in terms of the presumptions predicated upon neoclassical thought, and ultimately in the advancement, as the secondary literature outlines (Taffee, Gauthier, and Maraffa 1980, Boschmann 2011).

In terms of advancement, scholars utilizing techniques belonging to quantitative research have construed elaborate formulas and models to quantify certain aspects of the aforementioned themes and ideas. Wasmer and Zenou (2002), for example, have constructed a model to show at what distance job searches become negatively affected. By concentrating
on housing (rent), land prices, distance to and from potential work place, Wasmer and Zenou symbolize potential negotiations and trade-offs potential workers face between their dwelling, their potential employment, and the commuting costs associated with their search. Moving out of their formulaic (model) thinking, Wasmer and Zenou note, “market outcome is in general not efficient because of search externalities” (Wasmer and Zenou 2002, 517).

With respect to their literature review, and their model, Wasmer and Zenou express that the design of transportation policy plays a significant role in labor affairs. They write:

The social planner can raise wages by subsidizing the commuting costs of the unemployed and reduce them by subsidizing the commuting costs of the employed workers… [This] policy recommendation does not depend on the urban configuration, but the magnitude of the impact of the policy parameter does” (Wasmer and Zenou 2002, 517).

In the end, their conclusion follows that policy, specifically transportation policy, should differ city to city (Wasmer and Zenou 2002, 536). Nevertheless, transportation for them is a means to understanding labor concerns (first order concerns). Transportation is a means to that end.

Based off the premises set forth by Wasmer and Zenou, as well as by the work done by Hansen and Pratt on re-conceptualizing the relationship between the home-work relationship (1988), Ruppert, Stancanelli, and Wasmer (2009) build their own model to construct a unifying equation to show the effect commuting distances have on the labor market with special attention to bargaining power of workers (increase in wages correlates to an increase in distance from workplace to home) in the French context. For Ruppert, Stancanelli, and Wasmer, an important aspect in understanding how, where, and why employees choose or will choose their place of employment depends upon their commute
In terms of jobs and access, mobility, and accessibility, geographers inspired by concepts and ideas within urban planning have also constructed quantitative studies to uncover and model laborers’ ability to reach work and the micro-negotiations in choosing where to live (Fan, Guthrie, and Levison 2012; Yeganeh, Pearce, Hall, and Hankey 2018). But in terms of who has access, and how far those workers travel, scholars have also focused their attention primarily towards differences in sex and commuting patterns with respect to employment (White 1986; Hanson and Pratt 1988; Howell and Branson 1996; McLafferty and Bronson 1996; Ruppert, Stancanelli, and Wasmer 2009).

In each one of these case studies, transportation is at service to labor concerns, for they are the means to showcase them. In order to highlight changes in the market, and overall employment patterns, scholars utilize transportation, as commuting time, to highlight the higher order concerns of labor and housing. Though the literature showcases this methodological leap, insofar as considering transportation concerns to reveal phenomena within labor and housing, it also crystalizes the importance on the relationship between labor and transportation. Labor concerns have as much to do with transportation, as transportation has to do with labor. It was perhaps best stated by Wasmer and Zenou when they noted transportation policy, and not always urban reconfiguration of space, can best serve market realities. The models reflected in the scholarship demonstrate the need for a complex understanding and anticipation of variables in order to make sense of these complex urban phenomena. The scholarship sees this need, and thereby forges and highlights the connections. As seen from the urban geography scholarship, labor in terms of employment,
labor with respect to dwelling (housing) and labor in terms of reaching their employer, are running constants throughout the literature. However, when we recall the literature from the previous chapter, a fuller picture of transportation concerns, and its entwinement with labor and housing concerns comes into full view. Ultimately, transportation concerns are urban concerns. Such a thinking cannot escape any kind of access-centric policy analysis. Though, as the case study will showcase, the data pertaining to the Hudson yards area is still forthcoming, considering labor within the policy analysis is still vital, for the relationship, regardless of the model or method, is positive according to the literature.

Now, coming back the Schaefer and Skalar’s initial claim, if cities are about access and less about the domination of mobile, then the urban planners and government officials arguing for urban renewal of the Hudson Yards are mistaken. Their inherent focus has been on *mobility*. But, if businesses are merely left to pollinate in the Hudson Yards area, juxtaposed to the realities of rising rents, wage stagnation, and the rise in cost of the subway, then where is the expected demand to said supply? As noted in the historical context of this piece, post-1980s, economists argued to pump up the credit economy utilizing supply side economics, predicated upon the thinking of Milton Friedman and Friedrich Hayek (Friedman 1962; Hayek 1966; Hayek 1973). From this new paradigm of economic thought, supply side economics would resolve the contradiction between the missing demands for supply. The effects of this move can best be seen in the 2008-housing crisis. However, clearly this is not the answer. If the renewal of the Hudson Yards and Manhattan more broadly are to be realized, then new strategies need to be developed.
Chapter 4.0: Policy Analysis and Recommendations

In terms of the 7-line extension, the mobility-centered argument – providing a metro station to the area and thus allowing economic life to blossom, – is wishful thinking. It becomes evident that the Hudson area is directing its attention towards those who have the means to live or work in Manhattan Island, and not for the average New Yorker. This is to say, access and mobility for a specific clientele; those who can afford to live and work in Manhattan. What then of the average New Yorker? How can the Hudson Yards extension realize its promise to promote economic prosperity for New Yorkers in general? Perhaps the first of many steps should be towards access.

From an access-centric point of view, one that moves away from TIFs and PILOT programs, debt finance may not be the only way to absorb external funds. According to the Center for Transportation Studies at the University of Minnesota, value capture could be an alternative method for future transportation finance. As Graph 7 showcases, transportation has a direct effect at increasing the price of land. The report states “locations with higher accessibility tend to command higher prices for land. Landowners and developers benefit from this increased value” (Lari, Levinson Zhao, and Iacono 2009). By capturing the value from the increased plot of land and redirecting the surplus value back into transit, transit systems can then seize upon and absorb these newly acquiesced money, and then place it back into its overall system. Ultimately unburdening the subway user through alleviation of fare price hikes. Value capture mechanisms thus target two major groups benefiting from the rise in land value: developers and landowners. With regards the Hudson Yards area, an area
booming with development, it only seems fair that, if the area is to be revitalized, then the projected profits and revenues should be re-circulated back into transportation, i.e. the very mode that makes accessibility into that area possible. While TIF and PILOT programs aim to set aside funds for fixing roads or sidewalks for example, they allow for the proliferation of giant contractors’ profits, like Goldman Sachs. These programs do not, however, capture the value that transportation has initially provided to the land. Two methods to provide access in terms of transit and accessibility to land, both for real estate and developers and private persons, while putting back excess profits into transportation, can be found in the examples of Transit Utility Fees (TUF) and Joint Developments (JD).

Graph 7:

Harnessing Value for Transportation Investment

According to the report, TUFs “treat transportation networks like a utility, similar to other local services such as water and wastewater treatment that are financed primarily from user charges” (Lari, Levinson Zhao, and Iacono 2009, 7). TUF specifically target landowners in particular. Fee rates are flexible and function on different bases such as property tax, fees applied per unit of housing or per parking space, “fees based on square footage or gross floor area, and fees that vary with the trip generation rate for a given property” (Lari, Levinson Zhao, and Iacono 2009, 7). In terms of economic efficiency, TUFs shift the cost of burdens, “from residential properties to commercial and industrial properties, which typically use the transportation network the most” (Lari, Levinson Zhao, and Iacono 2009, 7-8).

Joint Development (JD), unlike TUF, target developers rather than land owners. In order to further develop transportation facilities, and adjacent private real estate either contribute or provide facilities for transportation uses (Lari, Levinson Zhao, and Iacono 2009, 9). There are two categories of JDs: revenue-sharing arrangements and cost-sharing arrangements:

In the former, the infrastructure provider, typically a public entity, retains a share of the revenues from new development near the improved facility. In the latter, the private sector contributes directly to the provision or maintenance of the infrastructure itself (Lari, Levinson Zhao, and Iacono 2009, 9).

Due to the symbiotic nature of the deal, both old and new developments are then able to provide infrastructural assistance to transportation both within and without the Hudson Yards zone. In terms of access, a JD on top of a TUF ties land and transportation even closer.
together. Rather than allowing transportation to cause a spike in land value, value capture directs the surplus value back into the public’s benefit.

In the 2013 Health Impact Assessment (HIA) done by the Columbia, Mo, the HIA sought to make a case for a TUF. Particularly popular on the West Coast, mainly cities like Oregon, 19 cities use TUF as a technique of asserting external funding. Due to the fact that virtually all public transit makes no profit, fare increases work to cover less than half of transit operating costs. Like paying for Water, TUF operate as public utility. “The TUF is mostly based on the number of trips that are generated by residential and commercial properties; properties that contribute more trips contribute a higher fee per month” (Lari, Levinson Zhao, and Iacono 2009, 9). Measured on established metrics given by the Trip Generation Manuel published by the Institution for Transportation Engineers, this version of the TUF sets rates through residential and commercial units. For residents of Columbia, a mere $2-4 is being asked of them. Yet, what of those stricken by poverty. While $2-4 dollars seems like spare change, to those living in a place like New York City, especially in poverty, $2-4 dollars is substantial. In regard to the 7-line extension, a TUF program would, as already noted, seize upon the surplus value and absorb it. It would then use the surplus seized for subway maintenance, for example. In addition to this, TUF used in this manner would then use the surplus captured by surrounding businesses in the 7-line district, and then use those funds to potentially better the subway system. For those living in affordable housing, it would be important to strike to take a portion of the rent that is being paid and cycle it into the TUF. As in the case of Columbia, TUF asks relatively little of residents ($2-4), but more from building owners/developers ($30,000- 262,000) and commercial buildings (Heath
Impact Association 2013, 11). When adjusted to Manhattan pricing, thought values will increase beyond the four dollars, the average New Yorker will not find this amount burdensome. So, in terms of wages, housing, and transportation, TUF, forms a nexus allowing for the alleviation of external transportation funding, by asking everyone to pay their share. And what is to be said of the TUF once the boom begins to fall towards a bust? Well, as already mentioned, the TUF are based upon number of trips. That is to say: the bigger the boom, the more money being captured, and visa-versa.

In terms of JD projects, New York is notorious for executing them. According to University of California at Berkeley Institution of Urban and Regional Development, in their report regarding, “Transit Joint Development in the United States,” “as of 1990,” the report notes, “45 transit-related joint-development activity in New York City has been completed or were underway” (Cervero, Hall, and Landis, 67). Thirty-nine of these projects, however, were designed to construct heavy rail, while only 4 of the JD projects listed were for commuter rail (Cervero, Hall, and Landis, 68). The Railway Viaduct on the New Jersey Transit was the only commuter rail to have been completed. That was in 1959. According again to the report:

Because MTA owns so few parcels around its stations, the kind of joint development found in Washington, D.C or Atlanta has been impossible in New York….since MTA jurisdiction over land use covers only stations and rights-of-way, it has had to rely on the legal authority of the New York City Planning Commission to create the kind of regulatory environment that would induce cost-sharing on a significant scale (Cervero, Hall, and Landis, 69).

Two points materialize. First, because MTA relies the New York City Planning Commission, it therefore is political. In a literal sense, the MTA must work by and through bureaucratic
systems, for it to realize expansion plans, for example. This permits, fosters, and legally allows individuals or corporations to peruse their own interests. This does not mean the terms are equal for all, however. Dependent upon who possesses the greatest means to the end, the most money, political influence, etc., that individual or corporation will be able to supersede the opposition. Political power there is the name of the game. In the social activist sense, transportation development, funding, and policy are very much so within the realm of serving particular groups or parties, as the history of the 7-line has showcased. The second point, however, appears to be: because the MTA owns such little parcels of land, and that it relies on planning legislation to complete development plays, zoning functions as one specific and major mechanism to arouse developers (HYDC).

Coming back to the report once more, “to date the city has been able to secure improvements to transit stations by offering FAR bonuses only in the Manhattan Central Business District” (Cervero and Hall, 70). It is therefore no surprise as to why planners and government officials wanted to move the Manhattan Central Business District into the Hudson Yard area, and, in addition, why Mayor Michael Bloomberg rezoned the Hudson Yard area. According to the Hudson Yards Development Corporation website, the Hudson Yard is a zone both accessible with respect to zoning bonuses (FAR) and JD programs. In spite of this the potentiality for a JD program, in spite of the MTA’s need to modernize its antediluvian system, PILOT and TIF programs were instead implemented. The question

5 And this is, of course, one of the key contradictions within the money form, as Marx pointed out long ago. 1) Money is a commodity 2) a commodity embodying the use and exchange value contradiction 3) a medium by which large quantity of goods can be easily exchange 4) a representation of the universal value of exchange: the US dollar—at one time it was gold. 5) Money is a form of social power. Those who have the most of it are able to do more within a market system. More money means more access; more access means more of the ability to do something: this ability to do is called power, in French it stems from the verb pouvoir and in German it is
therefore becomes: why were Joint Development programs not initiated?

From the neoclassical point of view, land prices are and have been on the rise. The rights for the land are not within the MTA’s court, so to speak. The sheer density within Manhattan Island, they could argue, with its finance district and all, ultimately, pulls businesses and construction into the island. This was and still is the leading argument for building the 7-line, as the history has shown. It is by no surprise that during the 1980s Joint Development programs boomed. As mentioned elsewhere in this paper, the 1980s refers to the period of deregulation of markets and of public goods. To build track across newly deregulated land, all the while compressing space-time between products, the market, and consumers, the state and businesses utilized JD programs. Though the following statements to follow are indeed a-historical, New York had the opportunity to utilize JD programs. Whether or not that would have yielded a better New York City is, of course, a-historical. What is known is that TIF and PILOT programs have perpetuated the debt financing cycle, while JD programs surmount debt finance by bringing together public and private funds. JD programs therefore not only alleviate the need for debt finance; they also absorb external funds needed to maintain and improve infrastructure. In turn, relieving the stress put on subway riders by reduced fares. And in conjunction with TUF the New York City subway system will be able to capture the value it generates for housing, capture value from residents, land owners and developers, while integrating private corporations. For these reasons, utilizing TUF and JD programs in tandem is vital.

If the planners and state officials for the Hudson Yards area really want to help

vermögen. See chapter 3 of Marx’s Capital for a full explanation on the inner workings and contradictions of the money-commodity.
revitalize the area, then TUF and JD programs need to be seriously considered. For they not only focus on funding for housing and transportation, but they take bring together and take into account labor (wages), housing prices, and transportation in an organic and synthetic manner. By taking these three systems into account, this paper has argued greater access will be yielded.
Chapter 5.0: Conclusion

A conclusion is a kind of coming together. It is no simple affair. In an introduction an author laboriously labors to organize their piece. The author must walk through all steps of their design; the author must introduce the very core of their piece (the thesis), and how the case for such a thesis will be qualified; through such labors, the author intends not only to weave these individual threads into an overall composition, an overall pattern, an overall design, but articulate it in a clear and concise manner. By the end, however, the reader is within a positionality of knowing. All the elements known to the author is now, if successfully done, transmitted so the reader. All such elements are now in the known, and placed within proximity. They are enclosed, and in the known. In Latin, conclusion, *concludere*, in its literal form, means just this. Now, from the reader’s point of view, they have followed the steps; they have reckoned with the evidence, and the argumentation; and now they may, if they so choose, take such information and judge its validity against the world. Before we once again speak of the elements placed within such a parameter and allowed for this calculated thinking to manifest, the present author is overcome with the need to express some remarks regarding this piece are needed.

In terms of context, this project spans both years and disciplines. Originally written within the field of history, this piece came into fruition fours years ago. Much has changed since then. After arriving at Hunter nearly two years ago, I then reconceived of the initial case study I wrote all that time ago. Moving from time into space, methodologically, reshaped much of what was written then, and what is being presented here now. Likewise, the methodology section and introduction were crafted six months prior to this date here. The
thesis came into materialization in and through fragmentation. When looking upon a finish piece, one can often forget that writing is itself a process. Much of the thinking within this piece has changed drastically over these past four years. And, for the author, this rather interesting journey through transit finds its acquiesco here.

In terms of this thesis, a singular claim has run throughout the pages that have followed. Because transportation has been handled in as a means to an end, as a means to validating and proving concerns regarding labor, scholars have treated transportation as a secondary order concern. The driving force of this thesis has been to elevate transportation into the domain of first order concerns. In order to elevate transportation, and thereby prepare a dialectical policy analysis for the MTA’s 7-line with transportation now holding this new title as “first order,” this thesis presented theoretical considerations. Within the chapter titled “On the Nature of Transportation,” terms, ideas, and concepts existing within urban planning, neoclassical economics, and Marx’s writing in Capital were entwined. Additionally, great care was taken in showcasing the interconnected nature of transportation in the economic literature regarding labor concerns. By way of this synthesis, the analytical point arose that transportation concerns are entwined labor concerns. But theoretical considerations alone could not suffice to optimize such abstract knowledge. A context was needed to make sense of this particular case study. To do this, a geographic-historical mix methodology was used to understand space through time, and time through place. In this manner, the thesis balanced between practical and real concerns with theoretical and formal pursuits. To balance all these elements, a dialectical methodology propelled this piece onward.
Upon reaching the policy analysis, one can only be judged not by what they mean, but by how they say it. This analysis itself is an attempt to rethink the 7-line extension in a twofold manner. The first was to consider policy analysis in a dialectical way. The second was to provide some alternative methods to government funding, all the while highlighting structural issues facing the subway system within New York City, and considering those alternative methods with respect to the theoretical considerations in the chapter “On the Nature of Transportation.” To consider here means to synthetically entwine. This means the manner of thinking takes precedent, and not so much so needing to reiterate every theoretical string attached to these considerations. Ultimately the aim there was to display and illustrate an example of thinking dialectically in terms of urban policy. And it is with this point that I wish to profess one more thought. Though this thesis did not concern itself with topics of social justice, it would be false to claim these realities did not gravitate around the author as he wrote. Perhaps this piece may serve to inspire alliances between those communities, those who fight for transportation, labor, and housing rights. Perhaps elevating transportation into the realm of first order concerns is the way to doing so.

Finally, I here wish to express some concluding words regarding the Hudson Yards area. When the reframing of this paper took place, the Hudson Yards area and its construction were not at the fore of public discourse as they are in the here-and-now. Much of the data, as the years will advance, will be outdated. In the future, new data will be captured, coded, and encoded for all to access. New information will undoubtedly surface as to the politics of building the Hudson Yards, as to who will gain access to it, and who will reside there; ultimately, we will see in times to come whether the analytic herein carries forth
validity. In the end, time will temporalize what will be. As it is said in Spanish: *Que sera, sera.*
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