

First draft, comments welcome

**A Long History of a Short Block:
Four Centuries of Development Surprises on a Single Stretch of a New York
City Street¹**

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January 2015

Economic development is usually analyzed at the national level, but the literature on creative destruction and misallocation suggests the importance of understanding what is happening at much smaller units. This paper does a development case study at an extreme micro level (one city block in New York City), but over a long period of time (four centuries). We find that (i) development involves many changes in production as comparative advantage evolves and (ii) most of these changes were unexpected (“surprises”). As one episode from the block’s history illustrates, it is difficult for prescriptive planners to anticipate changes in comparative advantage, and it is easy for regulations to stifle creative destruction and to create misallocation. If economic growth indeed has a large component for increases in productivity through reallocation and innovation, we argue that the micro-level is important for understanding development at the national level.

¹ We are grateful for tireless research assistance from Marina Kosyachenko, and for comments received at an NYU Marron Institute brown-bag seminar in October 2014 and the NYU Development Research Institute conference, “Cities and Development: Urban Determinants of Success” on November 18, 2014. We are very grateful for support from the John Templeton Foundation for this research. Any views expressed here are the authors’ and do not necessarily represent those of the Templeton Foundation, the World Bank, its Executive Directors, or the countries they represent.

I. Introduction

How does development happen? Growth accounting exercises going back to those conducted by Hall and Jones (1999) and many others at the national level find that the majority of the variation in output is explained by variation in “total factor productivity” (TFP), which the literature has in turn explained by variation in innovation and technology adoption, through a process of creative destruction (going back to Aghion and Howitt 1992). A more recent literature has also emphasized misallocation of inputs across heterogeneous units leading to lower TFP.

But misallocation and creative destruction are difficult to identify at the national level (the usual unit of analysis in the empirical growth literature) and so require consideration of much smaller units. In the words of a recent survey by Restuccia and Rogerson 2013, the new misallocation literature:

starts from the perspective that in an economy with heterogeneous production units, aggregate TFP depends not only on the TFP’s of the individual production units but also on how inputs are allocated across these production units. That is, aggregate TFP can be low because inputs are *misallocated*. across heterogeneous production units.

The literature on misallocation has so far mainly identified heterogeneous production units with firms; this paper suggests considering also small geographic units behind larger geographic aggregates like “nations.”

One response to micro-level inefficiencies is that there needs to be more development planning (of a prescriptive nature) to move scarce factors of production from “obsolete” inefficient activities to more productive “modern” activities. An alternative response is that regulations and planning (such as “picking winners” or “fixing losers”) are themselves causes of inefficiency, and should be removed to allow factors to move to their most productive uses, driven by market forces (“spontaneous order”).

In a dynamic environment, the ability of prescriptive planning (such as “picking winners”) to allocate factors efficiently depends on the pace of creative destruction and the ability of policymakers (and others) to foresee changes in comparative advantage (“surprises”). It may simply be too difficult for planners to prescribe who, when, where, and what will succeed. It may worsen misallocation to attempt to reverse specific failures whatever, wherever, and whenever they happen. When resources are free to flow, whoever and whatever fails at a given time and a given place could be replaced by someone and something else that succeeds at a different time at the same place. So the best policy for development could conceivably be to let all factors of production spontaneously flow to whatever surprising success happens wherever and whenever.

Development does not have to be at either extreme, all planned or all spontaneous, there exists some balanced view in the middle. Some activities may be more amenable to planning than others, such as water supply or public health. The debate is often influenced by case studies of success and failure, usually of national development policies and outcomes or of particular country industries.

But exclusive attention to the larger units (usually nations) may give an unbalanced view that understates the rapid surprises of creative destruction, and the potential for misallocation problems arising from

heterogeneous TFP, which are more visible with smaller units. The study of only the national aggregate may understate the role of spontaneous market solutions to address the speed of change, surprises, heterogeneous TFP, and misallocation.

This search for balance motivated us to undertake a radical experiment: study the long history of a single city block in New York City. With a small unit like our block, we can see change initiated at the level of individual households or firms. We see a pattern of rapid change: the change of economic activities as well as the change in households or businesses. These changes are usually surprises that were not anticipated (we document 6 surprises in total). At the same time, they take place within a framework of some basic planning: street layout, water supply, sewers, public transportation, highways, fighting crime and fires, and other public services.

To make up for the small unit of analysis, we add a long time dimension that makes possible as large a sample as possible, to give a decent sample that, upon analysis, turns out to yield our bottom-line picture of FAST and SURPRISING creative destruction for the whole history of the block.

The small unit of analysis also allows us to illustrate why surprises are so prevalent. The origins of the shocks that affect the block can vary to what is happening two blocks over to what is happening on the other side of the world, varying from some very long run trends that affect the world or the US or New York City as a whole, to other trends that are specific to the neighborhood around the block. Moreover, these shocks interact with each other in unpredictable ways, as well as interacting with initial conditions on the block.

The block we study is 486 feet of a north-south street today called Greene Street between Houston and Prince Streets, on the northern edge of the SoHo neighborhood of downtown Manhattan (Figure 1), including the buildings on both sides of the street and the corners at each end. We took seriously the documentation of the block's history. In the first two centuries after Dutch settlement of New Amsterdam, we had maps and histories that allow us to track the few individuals operating on our block (beginning in the 1640s); we will cover this section relatively briefly. Beginning in 1834 and continuing until 2013, there were city directories and/or censuses and a few specialized sources that allowed a recording of who was on the block and what was their business activity approximately every five years.² The data is of course subject to some errors and omissions, but did make possible detailed description and analysis of what was happening on the block. This will constitute the bulk of the paper.

² The sources are: US Federal Census Records, 1830-1880; NYC Residential and Commercial Directories, 1834-present; NYC Tax Assessment Records, 1808-1940s; Sanborn Manhattan Land Book, 1905-present; NYS Factory Inspectors Reports, 1890-1913; NYC Reverse Listing Telephone Books, 1930-1993.

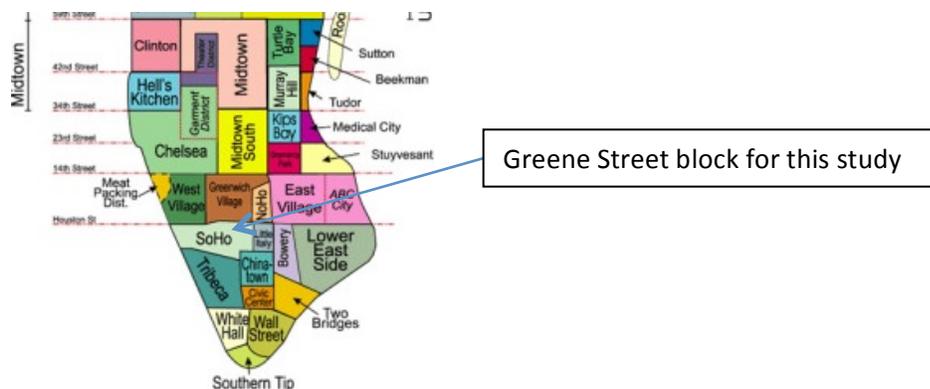


Figure 1: location of the block we study relative to Manhattan neighborhoods

The selection of the block was not random but it was fairly arbitrary. The block seemed suitable because it was close to NYU, and we were aware at the beginning that the block is a “success story” today and that there were some ups and downs in its past.

The block represents an immovable factor, land, in the production function for economic activity on the block, while all other factors in the block’s production function were mobile. The comparative advantage of the block reflects (i) the structures existing on the block, (ii) the relative prices of traded and non-traded goods that could be produced on the block, (iii) the relative supply of mobile factors such as types of skilled and unskilled labor used for production, and (iv) the technology available for production (subject to sometimes surprising TFP shocks, sometimes sector-specific, as discussed above). We will see the interaction of (i) and local and global shocks to (ii)-(iv) will drive rapid and often surprising changes in the comparative advantage of the block, which are best seen at a very micro level.

Agglomeration economies and the relation of what happened on our block to what happened on other blocks meant that actors on our block were always reacting to other actors, both those on our block and those on other blocks. All of these actors were in turn reacting to yet other actors farther away, elsewhere in the nation or the world.

For the descriptions of the shocks that transformed the block, we rely on specialized histories and some contemporary sources to suggest plausible links from shocks to transformations. There are limits to how much we can explain. Discussing changes that were often unpredictable, contingent, serendipitous, and surprising, it may be unconvincing to explain these changes even in hindsight. It is also in the nature of a case study that the explanations cannot be rigorously proved. We seek the middle ground between one extreme of an anarchic portrait – “stuff happens” – and the other extreme of an omniscient narrator who can explain everything; instead we will suggest some plausible and partial stories of change on the block to investigate the role of spontaneous creative destruction.

The rest of the paper proceeds as follows: Section 1 outlines the agricultural period (pre-1800), Section 2 covers the residential period (1800-50), Section 3 discusses the prostitution period (1850-80), Section 4 outlines the rise and fall of the garment industry (1880-1920), Section 5 covers the battle over planning (1920-60), Section 6 covers the artists era (1960-90) with Section 7 covering the modern period (since 1990) and Section 8 concluding.

I. The agricultural period

The earliest records we have for the block are for the 1640s, during the era of the Dutch colony New Amsterdam. The Dutch had brought slaves from Africa to New Amsterdam as early as 1626. From 1641 to 1647, the Dutch authorities gave parcels of 6 to 12 acres on our block and surrounding area to four slaves, Gratia D'Angola, Pieter Van Campen, Marycke, and Anthony Portuguese. The borders of the four parcels straddled our block. These slaves then became "half-free" – meaning that they were free, but their children would remain slaves.³

The gift was not quite as magnanimous as it appears, as the Dutch were at war with the Indians at the time and the blacks formed a buffer against the Indians. They produced food for the city during the war by paying a tax of grain and livestock. Giving this land to slaves also reflected the low value of the land at the time, which reflected the low population of the city (only 450 in 1644).

It also partially reflected the low expectations the Dutch had for New Amsterdam. During the treaty negotiations with the British after the war that resulted in permanent transfer of the colony, the Dutch at one point addressed the question of whether to retain Dutch Guiana (what is today Suriname) or New Amsterdam, and chose the more promising sugar-producing slave plantations of Dutch Guiana.

Surprise 1: Dutch expect New York to be less valuable than Suriname.

The Dutch did not anticipate the extent to which New York would later prosper through triangular trade with Caribbean sugar plantations and Britain. As historians would put it, "New York now lived by feeding the slaves who made the sugar that fed the workers who made the clothes and other finished wares that New Yorkers didn't make for themselves."⁴ This trade meant the value of the farmland on Greene Street increased and the British would not allow slaves to continue ownership. The combination of high transport costs on land and low transport costs at sea made farmland adjacent to ports especially valuable. After Dutch New Amsterdam became British New York in 1664, increasingly repressive British laws against slaves and blacks made it impossible for the ownership of Greene Street by "half-free" slaves to continue.

³ Note, however, that there were also other restrictions on their freedoms.

⁴ Burrows, *Gotham: A History of New York City to 1898*, p 122.

Nicholas Bayard III went bankrupt and was forced to sell the Bayard farm on November 1, 1789 to pay his creditors. Bayard III died in New York, but his descendants moved to Georgia.

II. The residential period

The port that had made the Bayard farm prosper led to more city population growth that would eliminate the same farmland. As the city kept growing, it was predictable that the block (1.5 miles north of Wall Street downtown) would change from farmland to city, but when that would happen was not so predictable. It depended on how fast the population grew, as well as the draining of the wetlands shown in Figure 1. (In the end, the wetlands were drained by a canal along what is now Canal Street about the same time as settlement discussed below.)⁶

The outcome on the block reflects the interaction between the rising citywide population and the location of the block. The location had previously been ideal as a food supplier for the city and foreign markets. After enough city growth, the block would be well-placed for residences on the upper edge of the city for more affluent citizens to escape the congestion, poor sanitation, and disease downtown.

The disease rationale for escaping downtown is well documented. New York City in the later 18th and early 19th centuries was plagued by disease outbreaks – Yellow fever and Cholera were particularly disruptive. The Yellow Fever epidemic of 1798, for example, killed 2086 people [Heaton p74].⁷ Other Yellow Fever epidemics occurred in 1795, 1796, 1802, 1803, 1805, 1819, and 1822.⁸

The Yellow Fever epidemic in the summer of 1822 was one of the most severe to hit the city. During this period much of the city was evacuated to the area to the north of the city, near the Greene St block, which led to its rapid building boom. “Temporary stores and offices were erecting and even on .. Sunday...carts were in motion. Within a few days, the Customs House, the Post Office, the Banks, the Insurance office and the printers of Newspapers located themselves in [Greenwich] village or the upper part of the Broadway [a block from Greene St], where they were free from the impending danger, and these places almost instantaneously became the seat of the immense business usually carried on...” (Hardie 1822 p42). Although part of this move was temporary and reversed after the epidemic, the buildings left in the neighborhood facilitated settlement of the Greene Street block.

The other factor that contributed to the emergence of the Greene Street block was citywide population growth spurred by transportation changes. The city population was still only 33,131 in 1789 when Nicholas Bayard III went bankrupt. The completion of the Erie Canal in 1825 was one of the shifts that accelerated growth of the city.⁹ New York’s population reached 202,589 by 1830.

⁶ Parts of the old wetlands area is still prone to flooding during heavy rain storms, such as the intersection of Grand and West Broadway 3 blocks south and 2 blocks west of the Greene Street block.

⁷ Some sources report around 1250 deaths.

⁸ Duffy, John, *A History of Public Health in New York City, 1625-1866*, Russell Sage Foundation, New York, 1968. Pp. 101-121.

⁹ In the mid 1800s agglomeration forces became much stronger due to changes in shipping technologies across the Atlantic. According to Glaeser (2005), the advent of faster and safer large ships changed the cross-Atlantic trade from a point-to-point system to a hub-and-spoke system. Because the Erie Canal connected New York to interior markets, New York triumphed over Philadelphia and other ports as the preferred hub.

We see the effect of these shocks and trends on the block. Based on contemporary maps, we infer the block was laid out around 1793,¹⁰ with the first urban housing around 1810.¹¹ From around 1810 to 1820, development of the block was relatively slow: census records suggest that in 1820, most of the lots were still vacant.

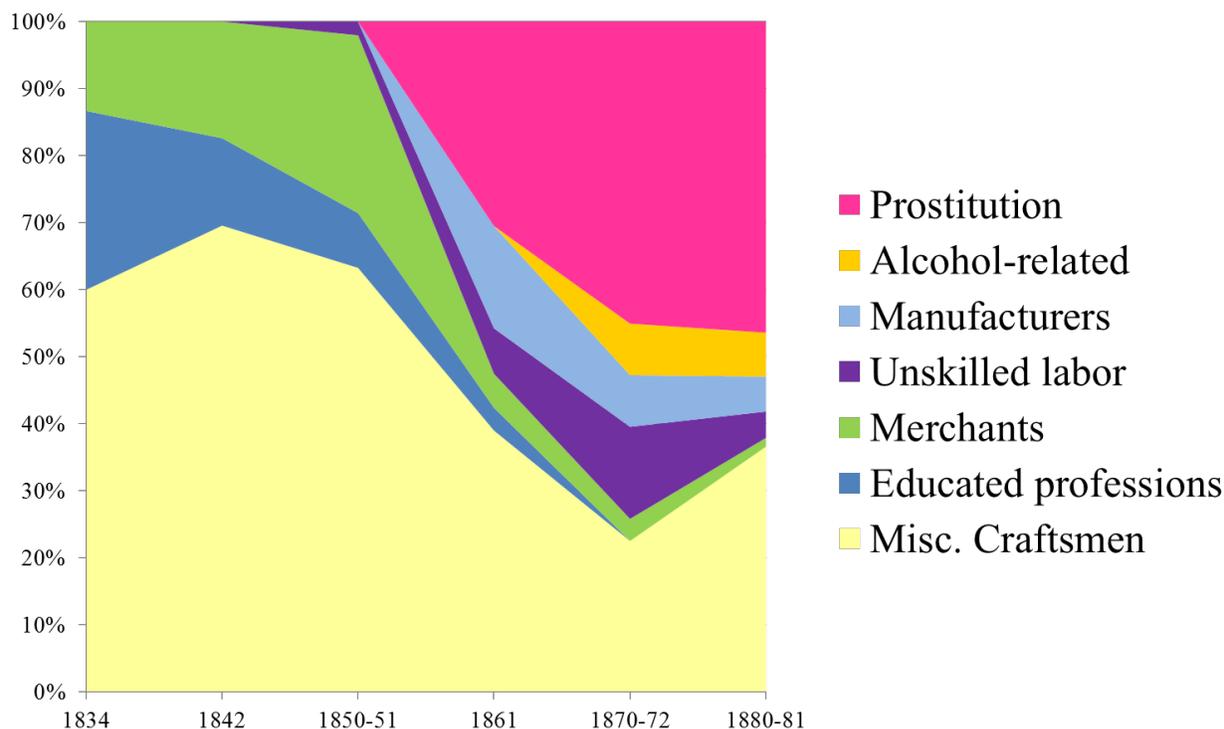
Over the decade 1820-1830, the years of the Yellow Fever epidemic exodus and the Erie Canal, the block experienced a construction boom. By 1830, the Greene Street block contained twenty-six houses, a shop, and a Dutch Reformed Church.

Our first detailed records in 1834 show 40 percent of the occupants of the block were merchants or pursued educated professions such as doctors, lawyers, reverends, or teachers. The other 60 percent pursued a large variety of crafts characteristic of a pre-industrial economy, such as carpenters, cabinetmakers, brass-founders, blacksmiths, bookbinders, and trunk-makers. Figure 3 shows the combined share of these 3 groups – merchants, educated professions, and craftsmen – accounted for almost all residents of the block until the 1850s.

¹⁰ See [map](#) (1973) and [map](#) (1810)

¹¹ Stephen Ludlow's survey map Dec 29 1813, as seen in Ludlam (1835). See Commissioners Map 1811 shows development just past the block, and 1803 map show development not yet reaching the block.

Figure 3: Occupational shares of residents on the block, 1834-1881



For those few residents that reported the value of real estate in the 1850 census, average real estate assets were about \$30,000 per household or 260 times GDP per capita (for comparison, 260 times GDP per capita today is about \$14m) - suggesting there were quite rich people on the block. More than half of the families in the 1850 census had one or more live-in domestic servants (usually young and born in Ireland).

An enduring city-wide spatial pattern contributed to the rise and fall of the block's residential neighborhood. The pattern was that the upper edge of the city's built-up area would be home to residents with higher socioeconomic status, while those on the lower end of such status would reside downtown. The same pattern ended the block's residential phase -- as the edge kept moving north with city growth, particular neighborhoods (like this block) would lose favor as preferred residences of the more affluent.

Shocks close to the block also contributed to the end of the residential phase, such as the opening two blocks over on Broadway of two large hotels called the Metropolitan (1852) and St. Nicholas (1853), and a theatre called Niblos Garden (1849).¹² We will see in the next section that these nearby hotels and theatres and other factors brought a new occupation onto the block that upper and middle class residents were unlikely to see as acceptable neighbors-- prostitutes. The first documented appearances of brothels on the block are from 1859 at 122 Greene Street and 133 Greene Street.¹³

¹² Niblos Garden was rebuilt from a previous incarnation after a fire and reopened in 1849.

¹³ Timothy Gilfoyle, author of *City of Eros*, kindly shared his primary source data with us, which helped us document the 1859 brothels. 133 and 122 Greene Street were listed as brothels in an 1859 publication in New York, "Directory to the Seraglios in New York, Philadelphia, Boston, and all the principal cities in the Union," with the

After the 1850s, the merchants, professionals, and craftsmen moved elsewhere, with the first two almost disappearing on the block. From 1851-1861, the number of buildings used as residences fell by around 75 percent and we see again the emergence of brothels. There is also the appearance of manufacturing and industry establishments on the block, which is the first sign of what will be a later manufacturing boom (discussed below). Some residents remained on the block but an increased share of them were single adults living together in boardinghouses rather than single family residences. The share of African-Americans on the block increased by 20 percentage points over 1850-70, and the share of foreign born residents also increased (by 10 percentage points over 1850-70). The changes on the block were unlikely to be tolerated by the previous middle and upper class residents.

Since we have the names of individuals on the block at intervals between 3 and 5 years, we can calculate the net amount of exit and entry from one year to the next. We start with the fraction of individuals who remain from one benchmark year to the next, p_N , and back out the annualized probability of staying p_N^A where there are T years between the benchmark years (assuming a constant exit rate):

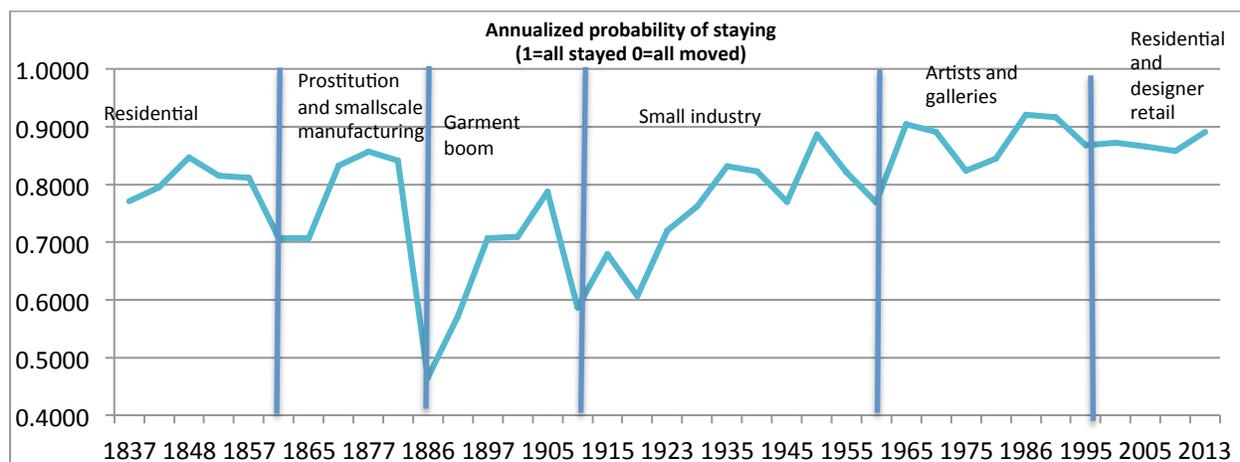
$$(1) p_N = (p_N^A)^T$$

It is a well-known feature of urban neighborhoods to have exit and entry, even during “stable” periods. However, the implied rapid change at the block level is another feature of spontaneous behavior that is often neglected in pictures of larger aggregates like the city as a whole. We do the turnover calculation for the entire period on which we have information on names of residents, businesses, or business owners, 1834-2013. The average annualized probability of staying from one year to the next for the entire period 1834-2013 is 0.785, which translates to a 30% chance of staying in the neighborhood for as long as 5 years.

In figure 4, we graph the probability of staying and also add lines approximately demarcating different stages in the block’s history. The measure is noisy, but some troughs in the staying rate seem to be close to times of neighborhood transition, such as the drop to 0.7 at the end of the residential period discussed here (we will discuss future such troughs below with each transition). Because of equation 1, such a drop in the annualized probability has a nonlinear effect: the probability of remaining on the block for 5 years now drops to 17 percent.

author given as “Free loveyer.” Both addresses were listed brothels in an 1870 list (see below). 122 Greene Street was listed in the 1861 City Directory as a female-headed boardinghouse, consistent with being a brothel from later evidence matching such entries with an 1870 listing of New York brothels (see below).

Figure 4: Annualized probability of staying at current address, 1834-2013



III. Prostitution

Surprise 2: Greene street becomes ones of New York City's largest sex-work districts.

By 1870, the Greene Street Block contained 14 brothels, the highest concentration of any block in the City (Figure 5). Just as surprising was the sudden end of prostitution on the block. Brothels still abounded in 1880, but during the next decade entrepreneurs demolished and rebuilt almost the entire block as cast-iron factories and warehouses, and what was left of the red-light district moved up town.



Figure 5: Brothels on Greene in 1870 (Source: *Gentleman's Companion*; picture reproduced from *New York Times*)

Information on brothels does not appear in our usual source of city directories. The 1870 data on location of prostitution on Greene Street and elsewhere comes from *The Gentleman's Companion* (1870), which is a pocket guidebook (anonymously published) of brothels in New York. More sporadic data comes from

police and court records. We cross-referenced this data against the 1870 and 1880 censuses, which show a distinctive profile for brothels of an older woman (or sometimes a woman and a man) and a number of young, single women.

The full set of brothels on the block - including those the *Companion* does not recommend - are listed in Table 1. The *Companion* also lists the name of the Madam (Table 1, Column A) and the 1870 and 1880 US Censuses provide additional details about the brothels and their prostitutes, as in columns B and C of Table 1. Brothels are usually identified in the Census as boarding houses, with the profession of the single young women not listed. Most residences have many prostitutes (up to 12), and they are generally in their early 20s. Most are born in New York or elsewhere in the USA, with about a fifth born overseas.

Table 1: Details of inhabitants of brothels on Greene St (1870 and 1880)

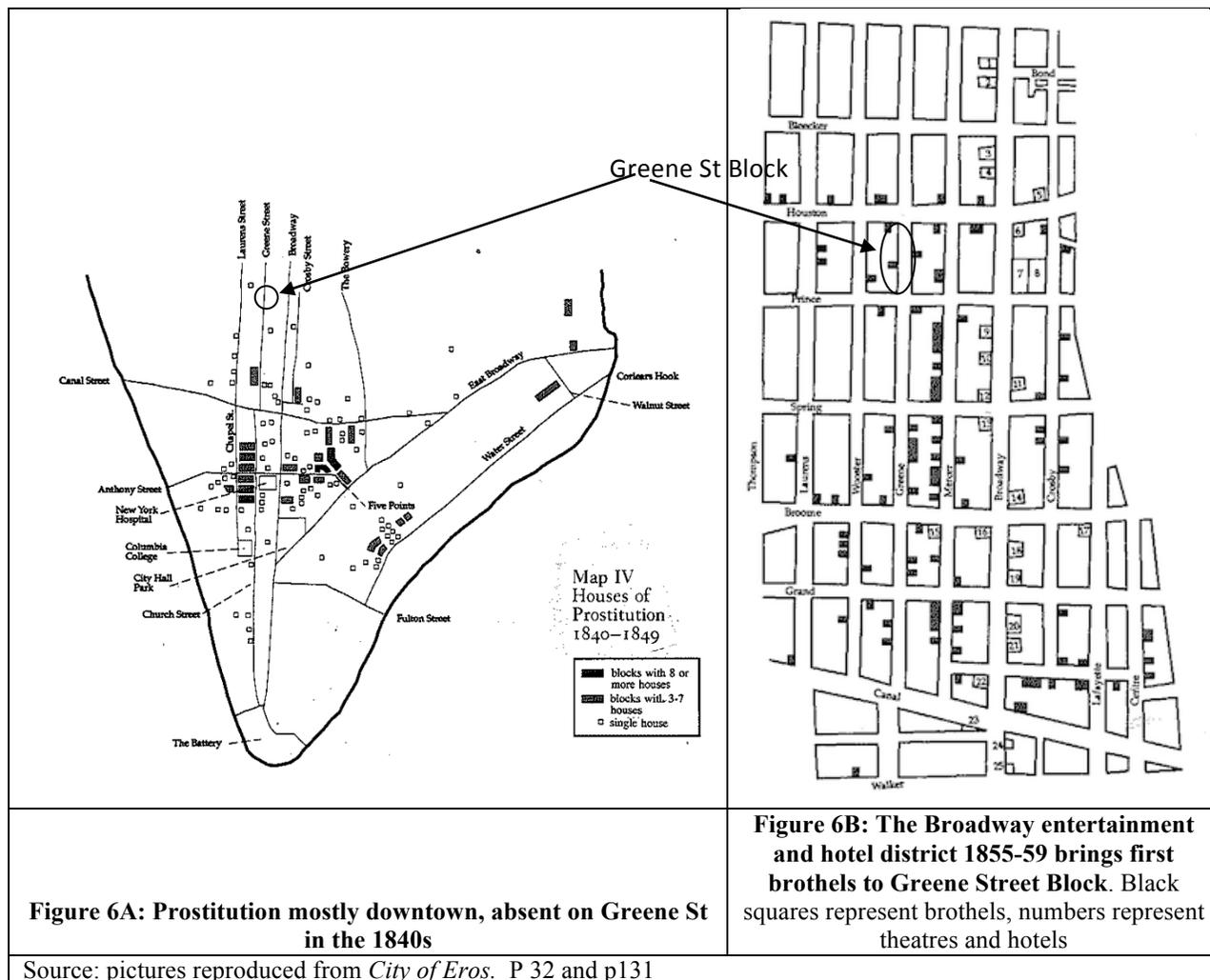
| | A. The (1870) Gentleman's Companion | B. US Census (1870) | | | C. US Census (1880) | | |
|-------|--|---------------------|------------|--|-----------------------------|-----------|-----------------------------|
| | Madam | Prostitutes | Ages | Birthplace | Prostitutes | Ages | Birthplace |
| 119.5 | -- | 4 | | NY, LA, PA, Ireland | Not a brothel in 1880 | | |
| 121 | Miss Williams | 5 | 20- 30 | NY 3; PA Canada. | 4 | 19- 23 | NY; MA 2; SC |
| 122 | -- | 7 | 15- 20 | NY 3; Ireland 4 | Not a brothel in 1880 | | |
| 123 | Not given | 8 | ~20 | NY 7; PA. | Not a brothel in 1880 | | |
| 128 | Mrs Bars | - | | | Not a brothel in 1880 | | |
| 130 | Laura Barmore | 5 | 20- 25 | NY; Ireland 3; England | 1 Lady boarder, 20 from NY. | | |
| 132 | Bella Armstrong | 3-5 | | NY (all) | 5 | | NY; Ireland 2, Swiss; MA |
| 133 | Barmore | 8 | 20s | NY 2, NJ 2, CT, PA, GA, Ireland | 4 | 20- 22 | NY 3; MA |
| 135 | Miss Daily | 8 | 17- 22 | NY 2; NJ 2; Ireland 2; PA, England | 8 | 20- 26 | NY 7; CT |
| 137 | Miss Daily | 5 | 20s | NY 2, NJ, MA Scotland | 17 | 18- 25 | NY (all) |
| 139 | Miss Whalen | 5 | 20s | NY 2; PA 2; England | | | |
| 141 | George Moore | 9 | 15- 30s | NY 3; CT Canada 2; Ireland 3 | 4 | 20- 24 | MA 2; CT England |
| 143 | Not a brothel in 1870 (contained male borders) | | | | 6 | 20- 23 | NY (all) |
| 145 | Mrs. Mayrs | | 15- 30 | NY 4; NJ 2; MA, PA, VA, LA, Scotland Ireland | 4 | 19- 22 | NY (all) |
| 147 | Miss Georgia | 12 | | | 7 | 17- 23 | NY 6; NJ |

Source: The Gentleman's Companion (1870), US Census (1870), US Census (1880),

From the Census, we assume that if an older woman is listed as household head and if "Boarding house" is given as her occupation, she is a madam and not a prostitute. Usually these women are in their 30s.

Greene St's suitability for brothels was likely due to the interaction of two local factors with another citywide factor. The first local factor was its proximity to large hotels and music halls on Broadway, and second was its housing stock with multiple small bedrooms left over from the residential period. The citywide factor was an overall increase in prostitution in New York.

The importance of the nearby hotel and entertainment district is illustrated by Figures 6A and 6B. In the 1840s, both entertainment and prostitution are still downtown and not near the block. In the 1850s, the Broadway hotels and theatres are associated with a concentration of brothels on blocks just south of our block, and the first brothels appear on our stretch of Greene Street. This would set the stage for the explosion of brothels on our block by 1870 as the hotels and theatres kept drifting north.



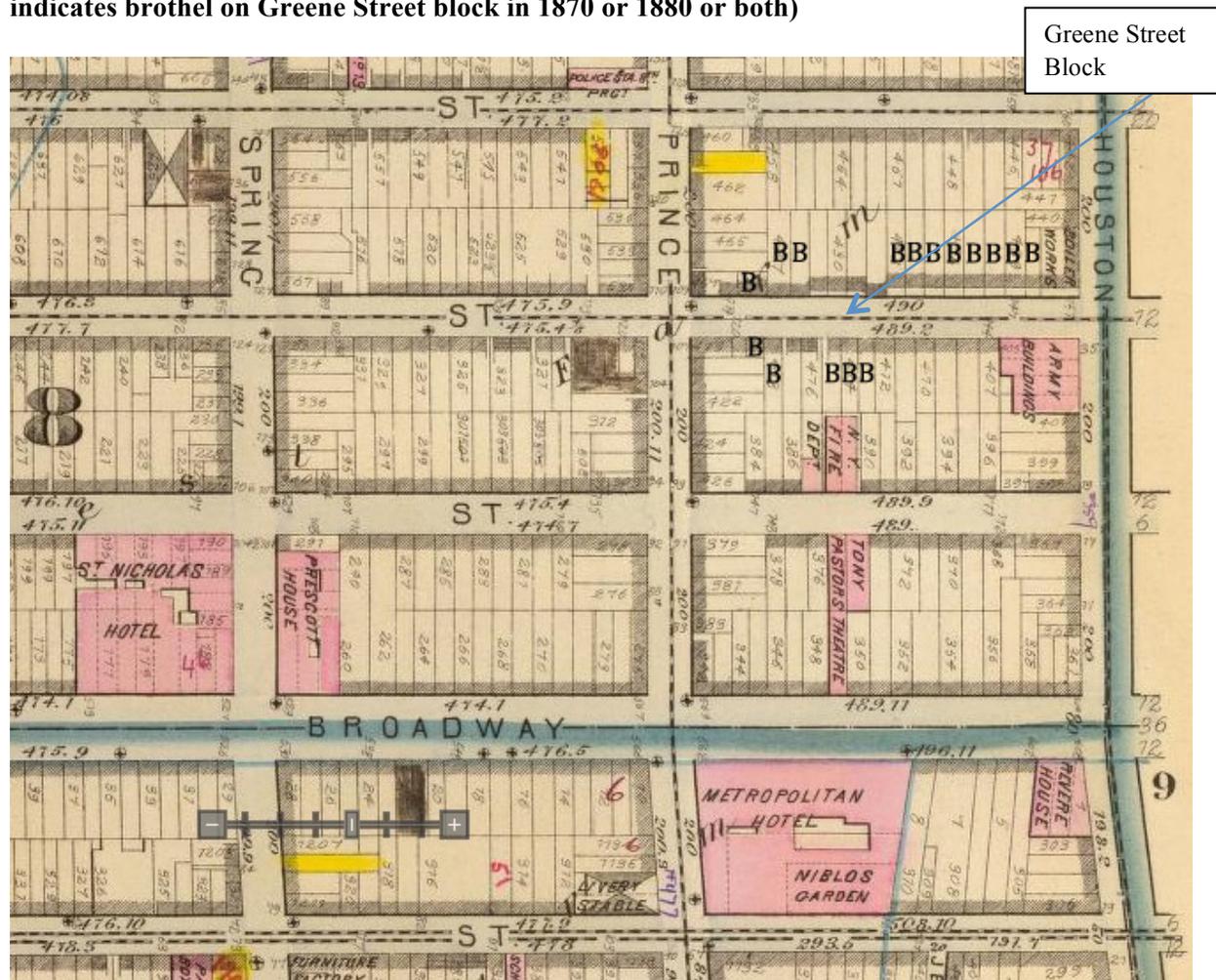
After 1850, six large hotels and seven prominent night time entertainment venues were within a few blocks of the Greene Street block.¹⁴ Figure 7 shows the ones closest to our block in 1879: the gigantic

¹⁴ Hotels: Hotel de Europe (550 Houston), Smithsonian Hotel (604-6 Broadway), Metropolitan hotel (580 Broadway), Collamore Hotel (532 Broadway), Prescott House (531 Broadway) and St Nicolas Hotel (519 Broadway). Entertainment venues: Metropolitan/Tripler Hall (677 Broadway), Old Stuyvesant Hall, Pfaff's Café

Metropolitan Hotel on Broadway between Prince and Houston, and the equally large St Nicholas Hotel block south (New York's first multi-million dollar hotel), as well as two smaller close-by hotels, Revere House and Prescott House, and two theatres, Niblos Garden and Tony Pastor's Theatre.

Entertainment venues attracted men seeking nightlife to the area near Greene St and provided a way for prostitutes to meet them. Many of the shows at the theatres were designed to be titillating: an 1866 production at Niblo's (two blocks from Greene) featured a hundred "semi-nude" women.¹⁵ At the time, around 30,000 regularly attended concert saloons, beer gardens and music halls.¹⁶ The 1870 and 1880 Censuses show many Greene brothels had bartenders, musicians and cooks, suggesting that they were more general nighttime entertainment venues in themselves.

Figure 7: 1879 Bromley map with Greene Street block brothels and nearby hotels and theatres (B indicates brothel on Greene Street block in 1870 or 1880 or both)



The other local factor for prostitution on the Greene Street block was the housing stock on Greene Street left over from the affluent residential era, as mentioned, well-suited for brothels because it had lots of bedrooms.

(645 Broadway), Laura Keane's Olympic Theatre (624 Broadway), Niblo's Garden Theatre (Prince & Crosby) Henry Wood's Marble Hall (561 Broadway), Taylors' Saloon (555 Broadway)

¹⁵ Ibid., p.128

¹⁶ Ibid., p.130

All of these factors shifted the comparative advantage of Greene St towards prostitution. For landlords, brothels were much more profitable than alternative uses of the residential housing stock. In fact, a number of New York property magnates, such as Amos Eno, built up a small empire of brothels, and sublet them to madams.^{17,18}

Why did the hotels and theatres conglomerate in this part of the city in particular? First, hotels and theatres wanted to be in the geographic center of town, which was near the Greene St block during the brothel era due to the rapid expansion of New York.¹⁹ Second, there are agglomeration externalities. Large hotels like the St Nicholas meant that entertainment centers and other hotels all wanted to cluster nearby, attracting more hotels.

The citywide growth of prostitution reflected larger demand and supply shocks that would interact with local shocks to produce the sudden concentration of brothels on Greene Street. At the time that prostitution first appeared on the block in the late 1850s, prostitution combined with related nightlife had grown from small beginnings to be one of the largest businesses in NYC. The estimated number of prostitutes varies wildly by source, but one estimate puts it about 10,000 in 1858, around 5-10% of the city's population of young women aged 15-30.²⁰

From the 1820s to the 1860s, as already noted, New York became America's largest port. It was the hub of hub-and-spoke trade system that brought travelling business people from all over America, and traders and seamen from all over the world. New York in 1861 was described as "a population of strangers in a strange land".²¹ From the 1850s, New York built a large number of hotels to accommodate visitors (which happened to be near the Greene Street block, as we have seen). The same port-driven population growth that had previously created the residential neighborhood on Greene Street now fueled the growth of prostitution, destroying residences on Greene Street and creating brothels.

Unlike demand, supply-side factors in prostitution were less localized near the Greene St block. Young women did not have many alternatives to support themselves if husbands or fathers died or left. A survey of 2000 prostitutes in New York in 1858 by a researcher named Dr. Sanger suggests that over three quarters of prostitutes entered into the profession as result of economic hardship or choice, and around half of prostitutes in 1858 supported a child. The fathers of around two thirds of prostitutes were no longer alive, and for most their fathers died when they were teenagers or younger. Another one third of prostitutes had suffered the death or abandonment of their husbands.²²

Low wages meant that it was often difficult for women to support themselves and dependents in other occupations. The median weekly earnings of surveyed women before they became prostitutes was \$2 a week in 1858, with more than a third of those reporting wages only earning \$1 per week.²³ Before

¹⁷ *Ibid.*, p.125

¹⁸ Earlier prostitutes reported paying \$2-\$5 (or even up to \$10) per week in rent. Brothels also made money by selling alcohol, and Dr Sanger's calculations put them as one of the city's largest industries by revenue.

¹⁹ The hotel building boom in the early 1850s may also reflect the Exhibition of the Industry of All Nations which was held in New York City in 1853.

²⁰ *Eros* p58. Dr Sanger estimates 6000, or 5% of the young female population 15-30. But this number excludes "healthy streetwalkers, prostitutes in first-class brothels and occasional prostitutes in tenements". p344

²¹ Samuel Halliday quoted in Gilfoyle (1992) *City of Eros* p113

²² Sanger p464

²³ Sanger p529

becoming prostitutes, around half of women had worked as servants,^{24 25} where the weekly average wage (with board) in New York was about \$1.²⁶ Non-domestic labor (excluding board) typically earned about \$2 per week in contrast to a cost of living of \$1.50-\$1.75 a week.^{27 28} Wages in male industries such as Cotton, Wool, and Iron in 1850 were more than \$5 a week whereas women's wages in the same industries, if jobs for women were available at all, were half as much.²⁹

Prostitute's incomes were many times higher than what women would earn in other professions. Dr Sanger estimates that "the weekly income of each woman cannot be less than \$10"³⁰ Anecdotal evidence suggests that it was common in 1858 for prostitutes to earn \$2 per customer, or \$4-5 if spending the night³¹, though prostitutes did have to pay "bed money" to their landlord of \$2-\$5 (or more) per week.

In 1880 the Greene Street was still full of brothels (as documented by the 1880 census in Table 1), and it might have been hard to anticipate that the block was about to be transformed into something very different and generating far more economic success as measured by real estate values on the block. In the next nine years almost the entire block was demolished and rebuilt as six-story cast-iron warehouses designed for industrial use. The next section will discuss why a garment boom emerged in the 1880s, which was a much denser and higher value use of the land than brothels.

At the same, the entertainment area was moving further uptown with the continued spread northward of the city with high population growth.³² For example, during the late 1870s and early 1880s, eight new theatres opened around Herald Square (Broadway, 6th Avenue and 34th Street).³³ The brothels moved with the entertainment district, by the 1880s there were few brothels in or around the Greene Street block (Figure 8).

²⁴ Sanger p524

²⁵ 25% had lived with parents or friends, and 25% had other professions, such as Dressmakers, Tailors or Seamstresses (12%)

²⁶ Sanger p623

²⁷ Gilfoyle, *City of Eros*, p. 59

²⁸ Ibid.

²⁹ Sanger p624

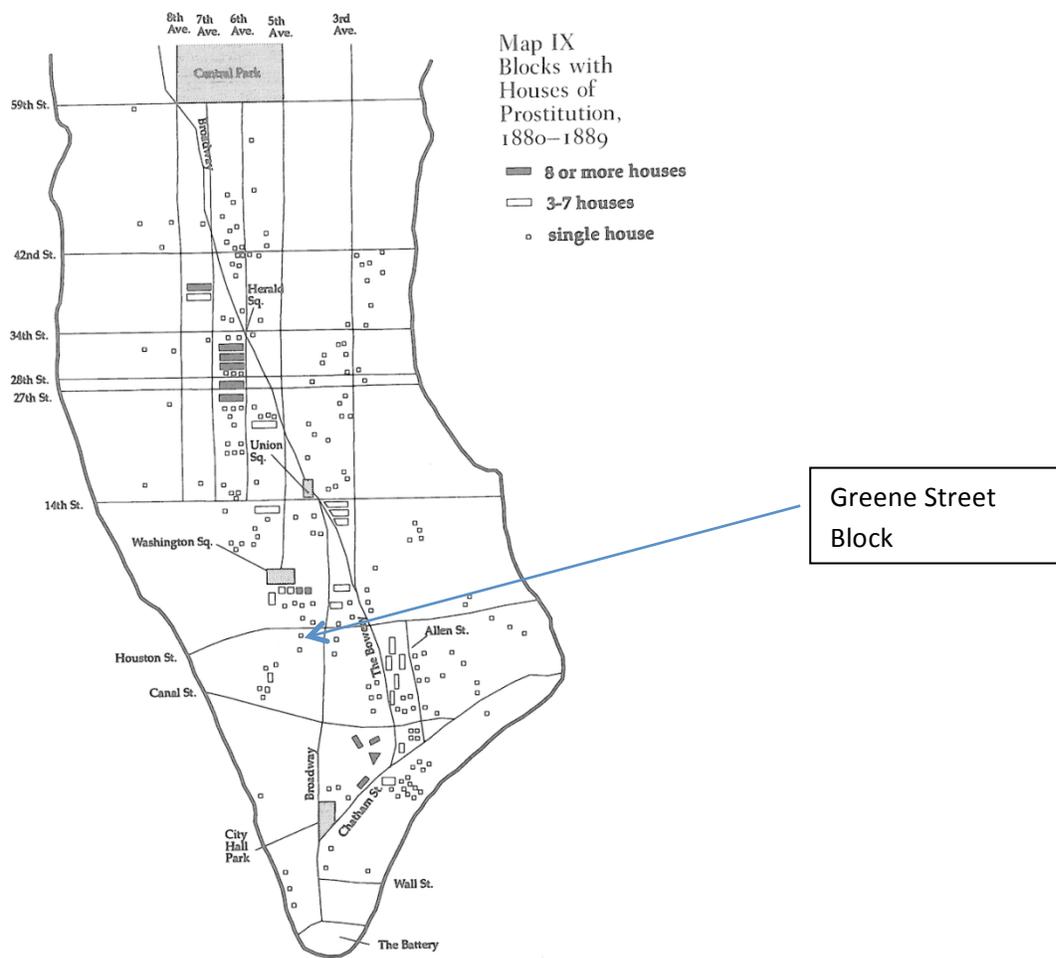
³⁰ Sanger p600-601

³¹ Gilfoyle, *City of Eros*, p. 60

³² The 1870s also saw the first successes of the political movement against brothels and prostitution in the form of the Society for the Suppression of Vice led by Anthony Comstock. However, the presence of brothels uptown in the 1880s (Figure 7) suggests that the effect of these reformers was small, and the timing of their rise was probably a coincidence

³³ Gilfoyle, *City of Eros*, p. 204

Figure 8: Brothels by 1880s now concentrated further uptown (picture reproduced from Gilfoyle, *City of Eros*.P 200)



IV. THE RISE OF THE GARMENT INDUSTRY ON GREENE STREET

Surprise 3: brothels are replaced by thriving garment business.

Beginning in 1871 but concentrated in 1881-1883, all but two of the small brick houses that lined the street were razed to the ground. Brand new five- and six-story cast-iron warehouses and stores for dry goods merchants rose in their place. These modern buildings were for a time the epicenter of New York City's huge and profitable garment trade, a trade made possible by new manufacturing technologies, and powered by the labor of New York City's new immigrants.³⁴ Measured by real estate values (to be

³⁴ B.M. Selekmán, Henriette R. Walter, W.J. Couper. "The Clothing and Textile Industries." In *Regional Survey of New York and Its Environs, Volume IB: Food, Clothing and Textile Industries Wholesale Markets and Retail*

discussed below), this was the block's greatest success so far, and would remain so afterwards until late in the 20th century.

In Figure 4 the lowest trough in probability of staying on the block in the whole series 1834-2013 corresponds to this changeover of the building stock. The turnover rate was 98 percent between 1881 and 1886.

In the mid-1880s, the new buildings on Greene Street between Prince and Houston represented the technology frontier for modern warehouse construction. The new cast iron technology, invented in late 18th century Britain, came to dominate New York commercial architecture from 1850 to 1880. It relied on mass-produced interchangeable parts so buildings could be built more quickly and more cheaply than in the past. Recent innovations in passenger and freight elevator technology allowed these buildings to be taller, while the slender but strong cast-iron columns allowed for large windows and large open internal spaces.³⁵ This technological progress first created a garment boom on the block and then the same technological progress ended it.

As is the case throughout Greene Street's history, some of the factors that influenced the rise of the garment industry came from far away and affected all of New York City, including the small square of the Greene Street block. Pogroms in Russia caused a large number of Russian Jews to seek asylum in New York. Other factors (the entertainment district moving up Broadway, transportation links, the Triangle Shirtwaist fire) originated very near our block.

Shopping and Financial Districts, edited by R.M. Haig and R.C. McCrea. New York: Regional Plan of New York and Its Environs, 1928.

³⁵ Nevius, Michelle and James Nevius. *Inside the Apple: A Streetwise History of New York City*. New York: Free Press, 2009.

Table 2: Cast Iron Warehouses on Greene Street: By Date of Construction

| Date | Address | Purpose | Size | Architect | Owner |
|------|---------|--------------------|-----------------------|------------------|---|
| 1871 | 142-144 | Store | 5 stories; 6 bays | Henry Fernbach | James Kent |
| 1877 | 146 | Store | 4 stories; 4 bays | William Worthen | John Althouse |
| 1881 | 129-131 | Store | 5 stories; 6 bays | Detlef Lienau | John C Barrow |
| 1883 | 119 | Store | 5 stories, 10 bays | J.Morgan Slade | C.H. Woodbury |
| 1883 | 125 | Store | 5 stories; 3 bays | Henry Fernbach | Sylvester Bench Estate |
| 1883 | 137 | Warehouse | 6 stories; 5 bays | Henry Fernbach | Henry & Isaac Meinhard |
| 1883 | 121-123 | Warehouse | 6 stories; 6 bays | Henry Fernbach | Lewishone Brothers |
| 1883 | 133-135 | Warehouse | 6 stories; 5 bays | Henry Fernbach | Henry & Isaac Meinhard |
| 1884 | 127 | Store | 5 stories; 3 bays | William Baker | Patrick Dickie Estate |
| 1884 | 148-150 | Stores | 6 stories; 6 bays | William Worthen | John Althouse |
| 1886 | 136 | Warehouse | 6 stories; 5 bays | Alfred Zucker | Simon Goldenberg & L. Schoolers |
| 1886 | 141 | Store and Lofts | 3 stories | Unknown | Cast iron additions to 1825 brick house alter it for commercial use |
| 1886 | 132-134 | Warehouse | 6 stories; 5 bays | Alfred Zucker | Simon Goldenberg & L. Schoolers |
| 1886 | 138-140 | Warehouse | 6 stories; 5 bays | Alfred Zucker | Simon Goldenberg & L. Schoolers |
| 1888 | 143 | Store | 5 stories; 3 bays | DeLemos & Cordes | Lippman Toplisz |
| 1889 | 130 | Store | 6 stories; 3 bays | Richard Berger | L. Sachs & Brothers |

Source: Landmarks Commission Report (1973)

The garment boom on Greene Street also reflected citywide trends. New York City was already a center of manufacturing, and the national leader in garment production. Garment production began in the tenements of the Lower East Side, but moved northwest as owners were forced by regulation and increasing demand for space to move out of residential buildings and into purpose-built lofts and warehouses. Between 1860 and 1910, the number of garment plants in New York increased by a factor of 17 (from 600 to 10,000) while the number of people employed increased by a factor of 8 (from 30,000 to 236,000.)³⁶ As the garment industry moved out of tenements and into factories, New York City's predominance increased.³⁷ Between 1900 and 1920, the dominance of New York City as chief US producer of women's wear only increased, rising from 65 to 74 percent share of all domestic production.³⁸

³⁶ Edward Ewing Pratt, *Industrial causes of congestion of population in New York City*, Volume 43, Issue 1 Columbia University New York 1911

³⁷ B.M. Selekmán, Henriette R Walter, W.J. Couper. "The Clothing and Textile Industries." In *Regional Survey of New York and Its Environs*, Volume IB: Food, Clothing and Textile Industries Wholesale Markets and Retail

Technological change was one important driving factor. The spread of railroads and continued improvements in ocean shipping gave New York manufacturers ever more access to larger markets. Elias Howe's upgrade of Singer's sewing machine, safety improvements in passenger and freight elevators, and building technology that allowed larger, taller, and safer buildings all helped manufacturers produce and sell ever greater volumes of clothing.

Perhaps New York City's most important advantage, though, was its vast pool of cheap and skilled labor, in the form of newly arrived immigrants. From 1880 to 1919, some 23 million people entered the US, 17 million of them through New York.³⁹ Many chose to avoid costly and arduous journeys to uncertain destinations further inland in favor of New York City's immediate economic opportunities and agglomeration economies of ethnic neighborhoods.⁴⁰ Figure 9 gives a picture of the changing composition of New York's foreign-born population, with a rapid increase in the number of Italians and Russians in New York between 1880 and 1910. This influx was important for the garment industry in New York in general, and on the Greene Street block in particular: Russian Jews and Italians, groups likely to have previous experience in the needle trades, made up 90 percent of the industry's labor force in New York City.⁴¹

In 1890, 90 percent of garment factory owners below 14th street were German Jews, many of whom had arrived during the earlier wave of German immigration and had first established businesses in the Lower East Side tenements before moving to the factories of Greene Street and environs. These businesses were attractive places of work for many Russian Jewish immigrants, who arrived during the late 19th century immigration boom and settled nearby on the Lower East Side.⁴²

Shopping and Financial Districts, edited by R.M. Haig and R.C. McCrea. New York: Regional Plan of New York and Its Environs, 1928.

³⁸ Selekman et al

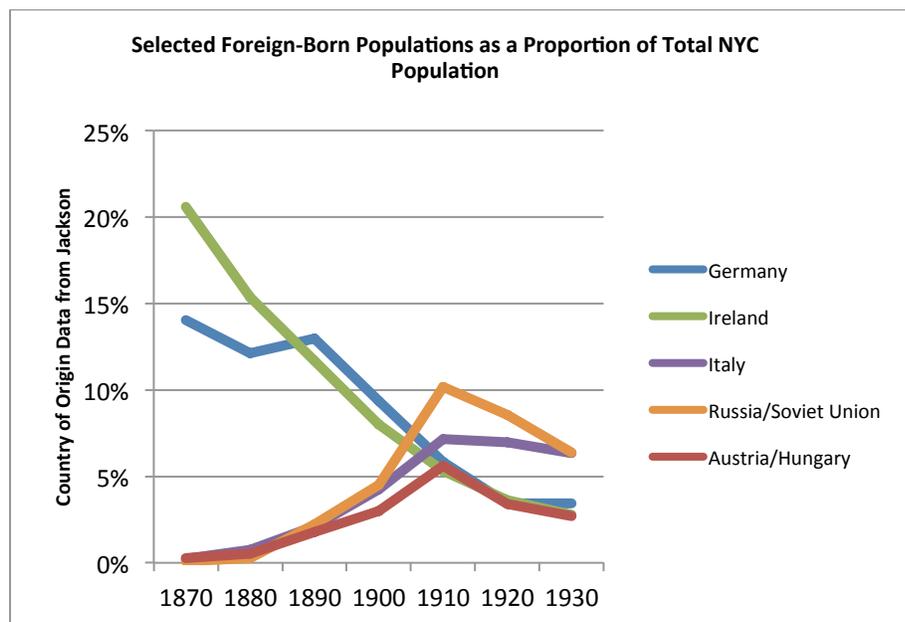
³⁹ Kessner, *Golden Door*

⁴⁰ Glaeser, *Urban Colossus*

⁴¹ Selekman et al

⁴² Sachar, Howard Morley, *A History of the Jews in America*

Figure 9: Shares of different nationalities of origin of New York residents (Data source: Jackson, pp. 584-584)



Italian immigrants to New York tended to settle in one of four separate “Little Italys” south of 14th street, the most famous of which was a few blocks east and south of the Greene Street block around Mulberry north of Canal (see figure 10 below). Another Little Italy was even closer, from West Broadway to Hudson Street, between Canal and West 4th street, just to the west of the new buildings on Greene Street block.⁴³ This pool of Italian immigrants also supplied labor for the warehouses and factories on Greene Street. Italian women in particular specialized in the ‘needle trades,’ including wholesale dressmaking, men and boys’ clothing, flowers and feathers, and textiles.^{44 45}

A study of 1,095 Italian women wage-earners undertaken between 1911 and 1913 explained the appeal of these trades to Italian immigrants: “Just as in every home you find a sewing machine in order that the mother can make her children’s clothes, so the daughter, when she is ready to go out to work, wants to choose dressmaking.” Many Italian women had learned sewing and embroidery at home back in Italy, since it was considered one of the few socially acceptable occupations for a young woman. Where they were able to find work doing detailed sewing and embroidery, these skills helped them advance in the cut-throat, competitive environment of New York’s garment industry.⁴⁶

Greene St was in a particularly good location *within* New York City to take advantage of broader developments in infrastructure and immigration. The Block was only 0.7 miles from the docks of Hudson

⁴³ Brown, Mary Elizabeth. “The Italians of the South Village.” The Greenwich Village Society for Historic Preservation, October 2007. http://www.gvshp.org/gvshp/preservation/south_village/doc/SVItaliansReport.pdf

⁴⁴ Odencrantz, Louise C. *Italian Women in Industry: A Study of Conditions in New York City*. Russell Sage Foundation, New York, 1919
<http://quod.lib.umich.edu/m/moa/0953120.0001.001/60?page=root;rgn=full+text;size=100;view=image>

⁴⁵ For example: census records tell us that Donato Longano, a tailor, and his wife Rosa emigrated from Italy to the US in 1880, settled on Sullivan Street, and had five children who attended school until they were old enough to go to work in the millineries along Greene Street. Michael and Louise Tassi also came to the US in 1880, and their three oldest daughters worked making dresses and curling feathers for hats in factories nearby.

⁴⁶ *Ibid.*

River, which were at the heart of Atlantic and regional trade. Figure 10 shows the Greene St block and nearby Hudson River piers in 1890. For example, from the 1870s the White Star line (pier 45, which later built the *Titanic*) traveled from Liverpool (UK) to New York, with a stop in Ireland. Although immigrants were one of the main cargos, the ships also carried goods, especially on the route back to Europe.⁴⁷ Compagnie Générale Transatlantique (pier 42) travelled to Le Havre in France. The Pacific Mail Steamship Company (pier 34) shipped to Panama, and then on the West Coast of the US (mostly San Francisco), and on to Asia. The neighborhood was also 0.7 miles from the St. Johns Park freight depot for Cornelius Vanderbilt's Hudson River Railroad, which gave the block connections to the markets of the American interior.

Within the city, the development of a network of elevated railroads, Broadway cable and electric roads, and street car lines made movement of goods and passengers faster between Greene Street block and these other points, good for both the commute of the labor supply to the block and for the movement of inputs and outputs of the factories on the block (see Figure 10). The Russian immigrant workers on the Lower East Side and the Italian immigrants from the Mulberry Street Little Italy with street cars had another option besides walking. The other Little Italy in the South Village was within walking distance to the west of the block.

The other local factor was that the Greene Street block was close to Broadway, the most prestigious retail avenue. Increasing demand for the limited commercial space and consistently high rents on Broadway pushed many smaller firms and wholesalers into the side streets. The new warehouses on Greene Street offered merchants more space in new, modern buildings, at much lower prices than on Broadway, and less street traffic made it easier to load and unload merchandise.⁴⁸

The garment-related firms that flocked to the area around Greene Street used the lower floors with their large windows and light-filled spaces to display merchandise and take orders from customers. Upper floors were occupied with paperwork, shipping, storage, and manufacturing.⁴⁹

New York real estate agent Leon Tanenbaum testified that in 1880 Broadway had held all manner of "clothiers, dealers in gents' furnishing goods, jobbers, furriers, and tailors' and clothiers' trimming dealers, suit and cloak manufacturers" but had witnessed at the end of the decade a "comparatively large influx to the cross streets." These firms abandoned Broadway because the new buildings were "superior to most of the old-time buildings on Broadway as they have passenger and freight elevators, steam heat, sanitary plumbing, good light and ventilation, and other attractive features all of which are essential to the health, comfort and convenience of those who transact their business in them."⁵⁰

In 1886, business directories show a total of 66 business listings on the block. At this point, all but two of the block's state-of-the-art cast iron buildings have been constructed, and the average age of the existing cast iron buildings is just four years old. Of the businesses on the block, 54, or 82%, are garment-related.

But the Greene Street block at this time has an even more specific focus: hats and hat-related businesses make up 55% of all businesses on the block. Hat firms clustered together for a larger customer base and ease of procuring supplies. Some produced their own hats out of straw, felt, and fabric, while others stocked the Greene Street showrooms with items produced in New Jersey, Connecticut, Massachusetts and Maryland.

⁴⁷ On the return leg, the steerage would be used for livestock, giving it the nickname "cattle class".

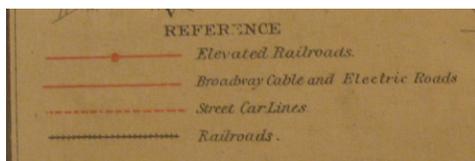
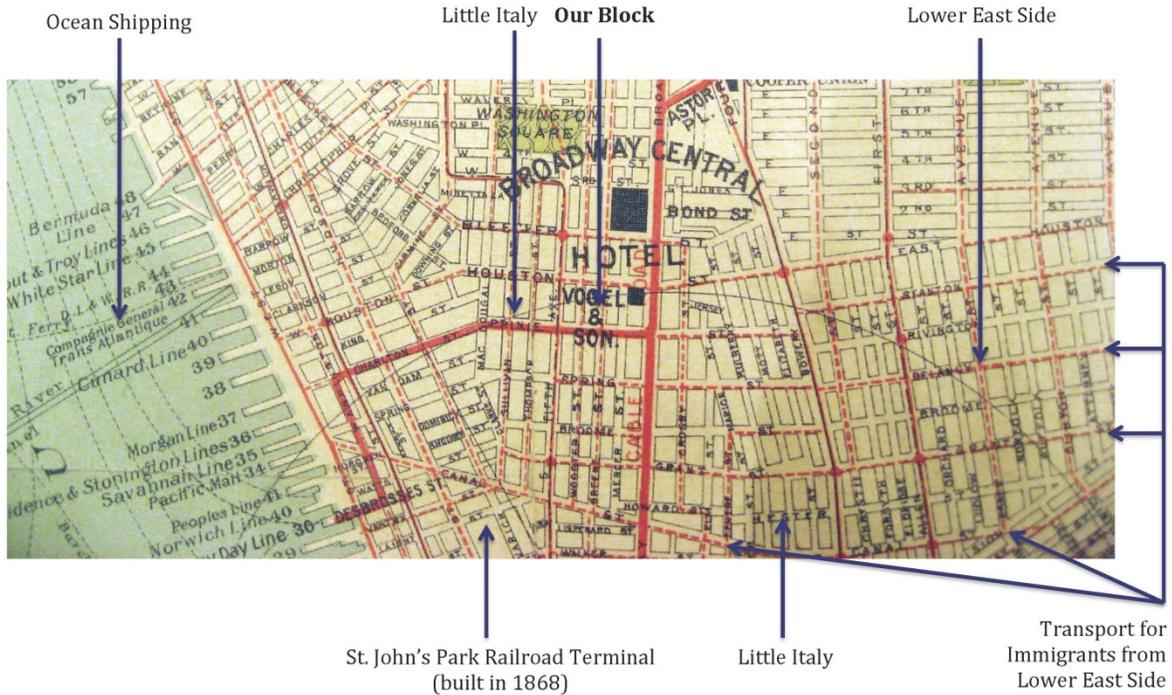
⁴⁸ "The New Mercantile District." *Real Estate Record and Builders Guide* 46 (October 1890): 1-54.

⁴⁹ Gayle, Margot. Friends of Cast Iron Architecture presents A walking tour of cast-iron architecture in SoHo and Burrows p. 878

⁵⁰ *Real Estate Record and Builders Guide*, p.24.

Figure 10: Shipping and Infrastructure around Greene [1890 Broadway Central Hotel Map]

1890 Broadway Central Hotel Map with Transportation Links for Greene Street Block



According to an 1895 study from the American Statistical Association, hat-producing firms earned higher profits and paid higher wages than those that produced garments such as cloaks and coats. One reason for this disparity was the skill-level of employees in each sub-industry. Cap-making (which was less sophisticated than the production of women's hats) required three to four years of training, and offered little opportunity for unskilled assistant jobs.⁵¹

The garment industry was prone to clustering, as the maps from the Factory Inspector's Department show. Agglomeration economies in this context reduced garment firms' costs of transporting goods (raw

⁵¹ Eaton, Isabel. "Receipts and Expenditures of Certain Wage-Earners in the Garment Trades." *American Statistical Association* 4, no. 30 (1895): 135-80.

materials and finished clothing), people (the labor force and customers) and ideas (new styles and trends for each new season, as well as improvements in manufacturing and marketing technologies.) The need to achieve efficiency in these areas in the hyper-competitive garment business was especially acute because of what was known as the “jobber-contractor” system, in which several firms played a role in the production of a single garment. Frequently the jobber procured raw materials, created designs of the newest fashions, stored the completed garments in his warehouses, and marketed and sold them to retailers or consumers. But the actual manufacture of clothing items was contracted out. These small contractors needed to be physically close to the jobbers to stay competitive. The jobbers, meanwhile, wanted to be close to suppliers of their many raw material inputs, as well as their customers.

By 1890 the transformation to a commercial and industrial zone on our Greene Street block was complete. The Real Estate Record and Builder’s Guide of 1890 declared the block now thriving and respectable, though they alluded to the block’s dissolute recent past:

During the last few years the wholesale trade has invaded...in considerable force. Mercer street, Greene street, and measurably Wooster street, have become business streets in sympathy with the movement on Broadway; and they have been lined with some very respectable wholesale warehouses as far northward as Houston street. A man can walk though those streets now without hearing himself too frequently accosted through closed window shutters.⁵²

About the development of the cast-iron business district, the same writer opined: “it is doubtful whether the reconstruction of a long-improved district by individual enterprise ever went so far in so short a time.”⁵³

Real estate prices are a good proxy for the value being created on the block; these prices tripled from 1880 to 1890, then increased further until 1910. This was by far the Greene Street block’s biggest economic success to date.

Surprise 4: the garment industry moves uptown and Greene Street enters a long decline

In line with the idea of creative destruction, however, such remarkable success can often be temporary for any one location. The Greene Street boom ended after 1910. The same technological advances that began the boom ended the boom. Further advances in building technology and demand for new, bigger, more modern spaces quickly pushed the garment industry’s center of agglomeration up Greene Street past Houston, and then even further uptown.

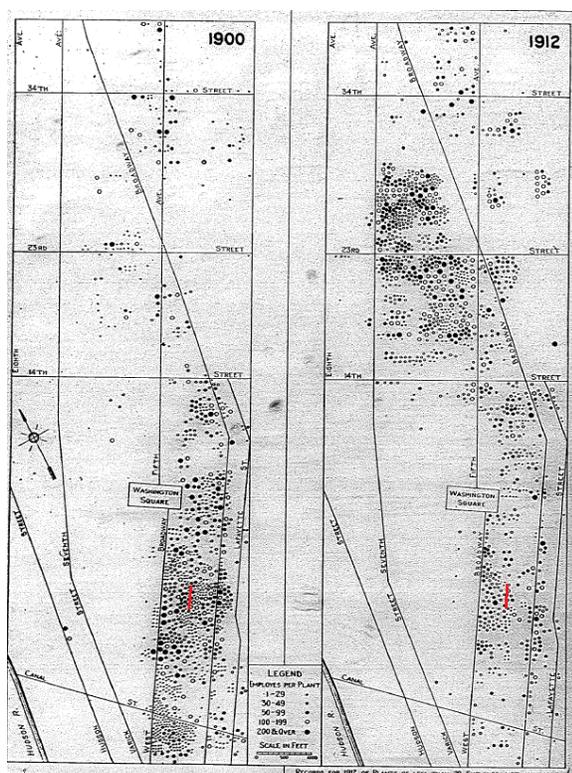
Surprisingly soon after the new cast iron structures were completed on the Block, new buildings a few blocks further north on Greene at Bleecker, West 3rd, Washington, and Waverly Place were attracting the largest and most successful firms dealing in garments and related trades.⁵⁴ This trend would continue steadily, as the garment businesses pushed further and further uptown, in parallel to the upward movement of fashionable shopping districts, before finally setting between 35th and 42th Streets where what remains of the NYC garment business still lies today.

⁵² *Real Estate Record and Builders Guide*

⁵³ *Ibid.*

⁵⁴ *Ibid.*

Figure 11: Location of garment plants in 1900 vs 1912. Red line shows the Greene Street block. Map reproduced from Source⁵⁵



The maps in figure 11 use data from the records of the Factory Inspection Department of New York State in 1900 and 1912 to show the location of garment plants in the city. The red line represents the location of the Greene Street block, in 1900 clearly in the center of the city's largest cluster of garment firms. A comparison between the two shows how quickly, within the space of 12 years, the garment industry moved uptown. In 1912, although there is still a clear presence of garment plants in and around our block, the area of greatest concentration has shifted north, from 14th to 30th St, between 7th and Broadway.

After three decades (1880-1910) of high real estate prices on the block, there was a steep drop from 1910 to 1920, leaving the value of the block lower than it had been in 1870 before the garment boom. The block's real estate value would not recover for decades afterward (as we will see below). During this period, the block could easily be perceived (and was perceived, as we will see) as a long-term failure, after only temporary success in the garment boom.

The demand for larger and better buildings partly reflected the demand for better worker safety, because the biggest garment factories further uptown complied more readily with new fire codes and other building safety regulations. The State of New York's 1896 Annual Report of the Factory Inspectors recorded 22 garment-related businesses violating code on our block, employing 399 men and 758 women. 337 of these workers were under the age of 18, and 44 were under 16.

⁵⁵ B.M. Selekmán, Henriette R. Walter, W.J. Couper. "The Clothing and Textile Industries." In *Regional Survey of New York and Its Environs, Volume IB: Food, Clothing and Textile Industries Wholesale Markets and Retail Shopping and Financial Districts*, edited by R.M. Haig and R.C. McCrea. New York: Regional Plan of New York and Its Environs, 1928.

Fire safety was the most visible safety issue. In the famous Triangle Shirtwaist fire of 1911, 146 people, mainly immigrant women, died when a fire broke out on the top three floors of the garment factory at the corner of Greene Street and Washington Place, 6 blocks north of our block, just off Washington Square Park.

Ironically, the Triangle factory had better conditions for safety than factories on our Block. As technologies allowing taller, safer buildings continued to evolve, and tragedies like the Triangle Shirtwaist Fire helped unions agitate for better working conditions for factory workers, many owners of buildings on our stretch of Greene Street failed to modernize the buildings to comply with new safety and fire regulations. As a result, the cost of insurance for textile firms there became a deterrent to renters, compared to the cheaper cost of insurance in the newer buildings they found they could rent further uptown.

“Certainty that the textile trade could not do business in any other section than where it had been located for many years was the grievous mistake landlords made,” wrote a real estate journalist for the *New York Sun*⁵⁶ in 1918, explaining the decline in prices post-1910. To the building owners, and many of the tenants who continued paying high insurance premiums in decaying buildings, it was hard to foresee the move uptown, even as it was happening.

The northward trend in the center of agglomeration continued in the decade that followed. By 1917, the northern agglomeration had grown and spread north to 34th Street. In 1922, the Greene Street block had a sprinkling of garment businesses, but they were small and sparse compared to the northern cluster. With each move uptown, garment firms were able to move into larger spaces in more modern buildings, and this made it easier for them to comply with fire and safety regulations requiring elevators, fire escapes, windows and skylights.

In 1922, the newest buildings had chutes and central package processing rooms to alleviate some of the chaos and congestion caused by the trucks that come to pick up finished packages at the end of each workday. They were up to 24 stories tall (compared to the Greene Street block’s 6-story warehouses), with more than 30,000 square feet per floor (compared to an average of 4,000 square feet per floor on the Greene Street block), allowing plenty of room for the larger, horizontal conveyor belts now allowing factories to produce ever-larger volumes.

Indeed the buildings on Greene Street after the garment bust remained inhabited, although by different kinds of businesses. After the end of the garment boom, Figure 4 above shows that the probability of staying on the block from one year to the next fell and stayed low through the early 1920s (implying annual turnover of 40 percent per annum, which implies 92 percent turnover in 5 years). Land values on the block depreciated: in 1923 they were \$501-\$1000 per foot front in the “old” garment section, compared to the “new” garment section where land values run from \$1000 to \$5000+ per foot front. The neighborhood would hereafter be widely perceived as a failed industrial slum, which led to some strong reactions about its future.

V. The Battle over Prescriptive Planning

The middle of the 20th century saw a battle over the neighborhood (later to be christened SoHo, for South of Houston) and its Greene Street block. Two visions for the area competed with each other, with city

⁵⁶ “Harbinger of Returning Greatness Seen in Buying Movement Which Has Developed in Old Silk District,” *The New York Sun*, August 25, 1918.

planners and the great City Parks Commissioner Robert Moses, on one side, against neighborhood activists and those who emphasized spontaneous development like Jane Jacobs, on the other side.

From the outside, there seemed to be little worth fighting for. In the 1930s, homeless and unemployed men constructed a squatter's camp at the north end of the block. The south side of Houston from Essex all the way to 6th Avenue was torn down to make way for the IND subway line, and a rough "Packing Box City" rose where the buildings once stood.⁵⁷

Beginning in the 1940s, some urban planners suggested ambitious plans for the neighborhood—plans that involved demolition and superhighways. The Holden-McLaughlin Plan of 1946, for example, proposed to make both Houston and Broome into major expressways for truck traffic, and to demolish and redevelop all of modern-day SoHo.

All of SoHo, shown as Area C in Figure 12, "has reached such a state of depreciation and obsolescence," wrote the planners, "that recent public improvements seem to have had little effect upon it" and is "recommended for clearance and redevelopment."

⁵⁷ A picture of Packing Box City in 1933 is available in the online appendix to this paper. "Shacktown Pulls Through the Winter: The Unemployed in Their Shanty Villages Do the Best They Can With Little and Hold Their Heads High," *The New York Times*, March 26, 1933.
<http://query.nytimes.com/mem/archive/pdf?res=F00C1FFE3D5E1A7A93C4AB1788D85F478385F9>

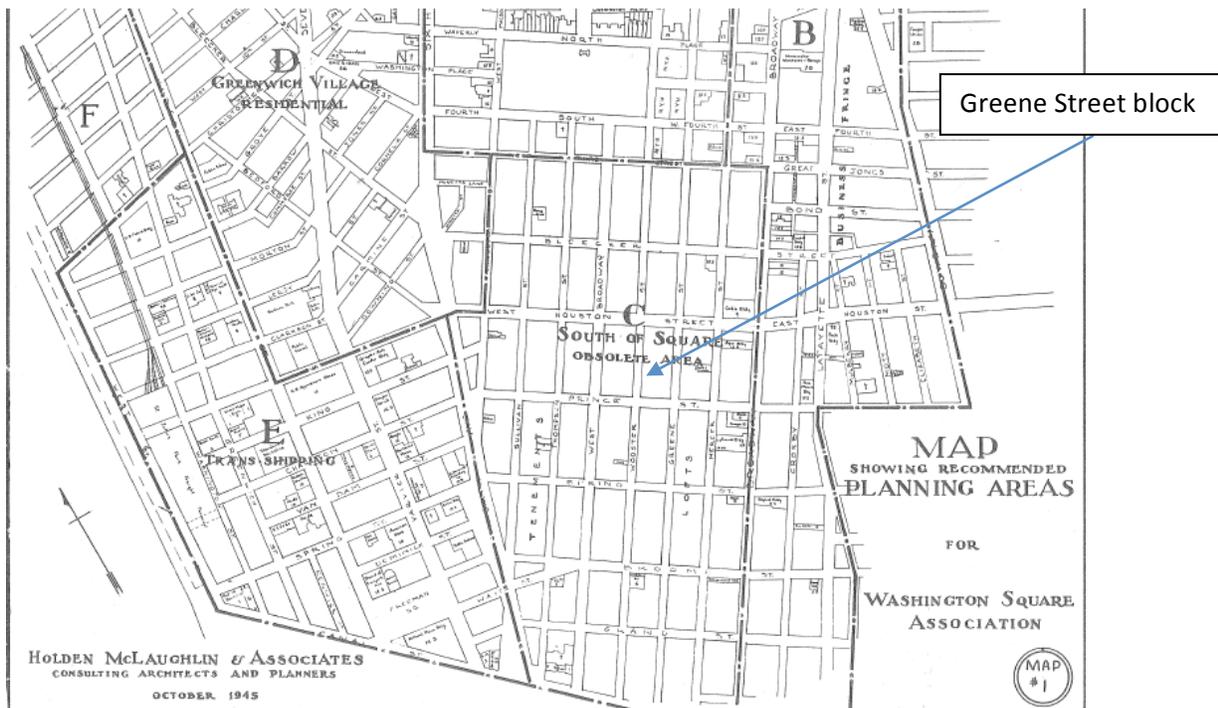


Figure 12: Illustration from the Holden-McLaughlin Plan of 1946, showing Greene Street Block (arrow) in the center of the “obsolete area.”

From 1922 to 1946, the land on our block depreciated by around 50%. When calculating the assets on our block specifically, the Holden-McLaughlin planners saw the absence of “fireproof” buildings or any “important buildings,” aside from a post office constructed in 1910. They said that “the depreciation is so widespread that improvement cannot take place except by concerted action.” The planners suggested using eminent domain as a strategy “to prevent obstruction through holdouts.”

The authors of the Holden McLaughlin plan wrote: “It is at once evident that in Area C there are whole blocks which have practically no buildings of value on them. The obvious conclusion is that an opportunity is here presented for large scale replanning, rearrangement, and rebuilding.” And specifically of our Greene Street block: “None of the present buildings in the block are really worth preserving. This is a clear case calling for complete demolition and complete replacement. The situation is most extreme, but it is nevertheless typical of most of the properties south of the Square.”

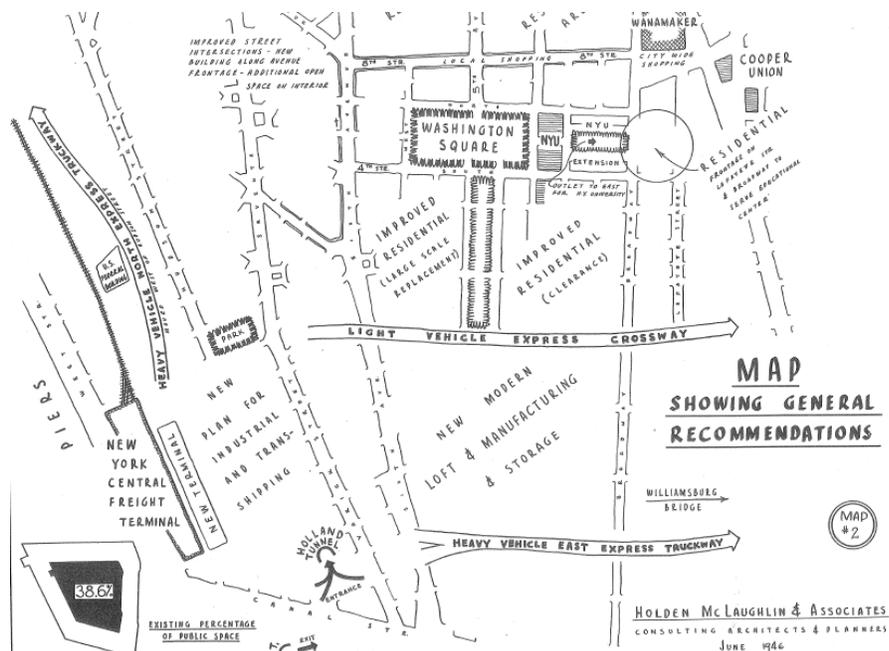


Figure 13: Illustration from the Holden-McLaughlin Plan of 1946.

The 1946 Plan recommended demolition of all of Soho, including Greene Street, to make way for “New Modern Loft & Manufacturing & Storage” (Figure 13).

In the 1940s, the city’s most famous and powerful urban planner, Robert Moses, was busy building enormous public works projects, mainly in the outer boroughs. His projects included the Henry Hudson parkway, the Verrazano-Narrows Bridge, The Brooklyn Battery Tunnel, the Brooklyn-Queens Expressway, which arguably had a positive effect on New York City’s development.

When the federal government began providing cities subsidies for “slum clearance” under Title I of the US Housing Act of 1949, Robert Moses saw an opportunity to rid the city of its most pernicious “slums” and blighted areas, turning his attention to projects in the heart of Manhattan. During Moses’ career, he received \$65.8 million in federal funds for slum clearance in 18 different sites throughout New York—more than any other city.⁵⁸

The intellectual underpinning of this federal program reflects views widely held at this time. First, that the street-centered urban grid system creates unhealthy living conditions, depriving people of open space, air, light. Here the remedy is the superblock containing “towers in a park,” creating enormous tall buildings set back from the street amid open plazas and green space.⁵⁹

In a 1953 speech, Moses said:

I take this occasion to plead for the courageous, clean-cut, surgical removal of all our old slums.... [T]here can be no real neighborhood reconstruction, no superblocks, no reduction of ground coverage, no widening of boundary streets, no playgrounds, no new schools, without the

⁵⁸ Ibid.

⁵⁹ Ibid.

unflinching surgery which cuts out the whole cancer and leaves no part of it which can grow again, and spread and perpetuate old miseries.⁶⁰

Moses was only slightly less ambitious than the 1946 plan. From 1951 on, Moses unveiled plans that proposed to tear down 53 acres of existing buildings, to consolidate 27 village blocks into 10 “superblocks.” The new buildings included classrooms and housing for New York University (between Washington Square Park and West 4th), market-value housing, and low-income housing along with a new public school and playgrounds. He also sought to turn Fifth Avenue into a four lane highway that would extend straight through the middle of Washington Square Park, bisect SoHo and join with a “Lower Manhattan Expressway” that would run along Broome Street, connecting New Jersey and Long Island. Unlike the 1946 Plan, the Moses plan did not call for full demolition of SoHo, but SoHo would have been surrounded and bisected by these plans.

These same plans mobilized neighborhood resistance. A Joint Emergency Committee to Close Washington Square Park to Traffic—derided by Moses as “a bunch of mothers”— won a first victory, a ban of automobile traffic through Washington Square Park.

The fight in the Village and SoHo continued, though, as Moses kept pushing plans for the Lower Manhattan Expressway (LOMEX), which would have run from the Holland Tunnel along Broome St, to Williamsburg Bridge, with a fork right at the Bowery or Mott St to connect with the Manhattan Bridge. A 1960 version of the plan required eviction of 2,000 families and 800 businesses. Alternative designs discussed in the 1960s included housing projects built as compensation, tunnels going under the subways, and 80-foot-high skyways.⁶¹

The Joint Committee to Stop the Lower Manhattan Expressway, including activists trained on the battlefield of Washington Square Park, opposed all of LOMEX’s incarnations. Jane Jacobs gained city-wide and national attention for her advocacy of mixed-use development, bottom-up community planning, and high-density neighborhoods as engines for economic growth in her book “The Death and Life of American Cities” in 1961.

Jacobs, though never formally educated in planning or architecture, mounted an attack on Modernist urban planning, and became an activist for the idea of spontaneous evolution of dense, people-friendly places. She challenged the urban planning orthodoxy represented by Moses: “As in the pseudoscience of bloodletting, just so in the pseudoscience of city rebuilding and planning, years of learning and a plethora of subtle and complicated dogma have arisen on a foundation of nonsense.”

Jacobs articulated a different vision of the successful city, one based on density and people spontaneously reacting to other people:

...[T]hat the sight of people attracts still other people, is something that city planners and city architectural designers seem to find incomprehensible. They operate on the premise that city people seek the sight of emptiness, obvious order and quiet. Nothing could be less true. The presences of great numbers of people gathered together in cities should not only be frankly accepted as a physical fact – they should also be enjoyed as an asset and their presence celebrated...⁶²

⁶⁰ NYPL archives

⁶¹ Ballon

⁶²

The combination of local resistance and Jacobs' alternative vision won the argument. Robert Moses lost his post in 1968, and in 1969 the LOMEX plan was definitively dead.

Moses managed to carry out only a fraction of his ambitious plans for the Village and SoHo. In the end, nine city blocks were demolished to create 3 superblocs between LaGuardia, West 4th Street, Mercer, and Houston, all now part of New York University. The Greene Street block immediately to the south survived with its previous building stock untouched.

VI. The Artists and Art Galleries

Surprise 5: artists, and later art galleries move onto Greene St, and property values rise.

A Columbia University Professor named Chester Rapkin in a 1963 report had pointed out that Soho businesses still did provide some value and employment. In 1962 on the Greene Street block, textiles and apparel firms still employed many workers, although these firms were on the margins of the fashion industry, producing basic, humble goods that didn't change styles frequently—women's and children's underwear, blouses, skirts, and sportswear. With no need to observe daily style trends, these firms benefitted from lower rents outside the modern garment district. Other industries found on Greene Street were printing, chemical, rubber, leather and paper products; manufacturing and construction, including hardware, spare parts and repairs, and wholesale trades (textile and paper waste). The next phase after this low-value industry phase was another surprise.

A caption to one of Chester Rapkin's photographs, dated 1962, reads: "Artist in resident on the fourth floor. Behind this inauspicious exterior a man of creativity and taste has transformed bleak, undifferentiated space into a graceful atmosphere for working and living." This unnamed artist would have been one of the first to move into unoccupied loft space on the upper floors of the light manufacturing buildings that made up SoHo in the late 1950s and early 1960s. Because the neighborhood was not zoned for residences, artists lived in secrecy, covering their windows with blackout shades at night, moving houseplants away from windows, and dispersing household trash among public baskets on different blocks, all to disguise their presence from police and government authorities.

The artists had been part of the local resistance to Moses. By 1969, the Artists Against the Expressway were an influential group, able to call upon wealthy gallery owners, distinguished architects, historians and patrons of the art to rally publicly to their cause, defeating LOMEX for good.

Besides low price and availability, another major motivating factor driving artists into the new SoHo loft spaces was the growing size of artists' canvases, sculptures and experimental works, reflecting international artistic trends. For example, Abstract Expressionism was a New York-based but internationally prestigious movement that featured "monumentally scaled works."⁶³ In 1966, New York Times art critic Grace Glueck asked, "Will today's art, getting bigger all the time, outgrow the uptown scene?" To accommodate the new larger canvases, diminutive uptown galleries "must dismantle stair rails, remove doorframes and hoist whole shows through windows." In 1970 in Life Magazine, artist and SoHo loft-dweller Nobu Fukui discussed the effect space on his work, which included enormous 24-foot canvases, splashed with abstract shapes: "If you live and work in very small apartments," he says, "your ideas get very small."⁶⁴

⁶³ Abstract Expressionism, Heilbrunn Timeline of Art History, The Metropolitan Museum of Art, New York, http://www.metmuseum.org/toah/hd/abex/hd_abex.htm

⁶⁴ "Living Big in a Loft," Life Magazine, 1970, photographed by John Downes (a picture from the article is available in the online appendix to this paper).

In 1971, the City Planning Commission voted to legalize the residential use of manufacturing lofts by artists in SoHo. Later that year the state legislature amended Article 7- B of the Multiple Dwelling Law to relax fire and building codes. The city's Department of Cultural Affairs was charged certifying artists for this new Artists in Residence program in SoHo. Yet even as these regulatory changes got publicity as victories for the artists and for SoHo as a neighborhood in the press, their effects were in fact quite limited.

Artists had won the freedom to live and work openly on Greene Street, free from the incursions of the fire inspectors, city regulators and the police, but still most artists didn't bother to apply for a certificate. Of the 700 artists in the spring of 1971, only 107 were legally certified. "I know I'm an artist," said one. "What do I need to have somebody else tell me I'm an artist for?" Others were offended by the narrow definition of an artist held by the Department of Cultural Affairs (visual artists counted, but not writers, dancers, or performers) and others by the very idea that such a department would have the authority to judge someone's commitment to create art.⁶⁵⁶⁶ Still others were living in buildings too large to qualify as artists' residences—the city had decreed that any buildings with more than 3,600 feet per square foot should still be zoned only for manufacturing. At the same time, the city often did not enforce the laws, so there was very little incentive for the artists to comply.

The same large spaces at low rents in SoHo attracted art galleries. Galleries in SoHo, like Leo Castelli at 142 Greene Street, were well-suited to exhibiting large canvases like those by Robert Rauschenberg, Roy Lichtenstein, and Jasper Johns.⁶⁷ By 1980, SoHo showed a large concentration of art galleries (Figure 14).

⁶⁵ Petrus, Stephen. "From Gritty to Chic: The Transformation of New York City's SoHo, 1962-1976." Ph.D. diss., City University of New York, 2003.

⁶⁶ Simpson, Charles. *SoHo: The Artist in the City*. Chicago: The University of Chicago Press, 1981.

⁶⁷ Margot Gayle, *A Walking Tour of Cast Iron Architecture in SoHo*

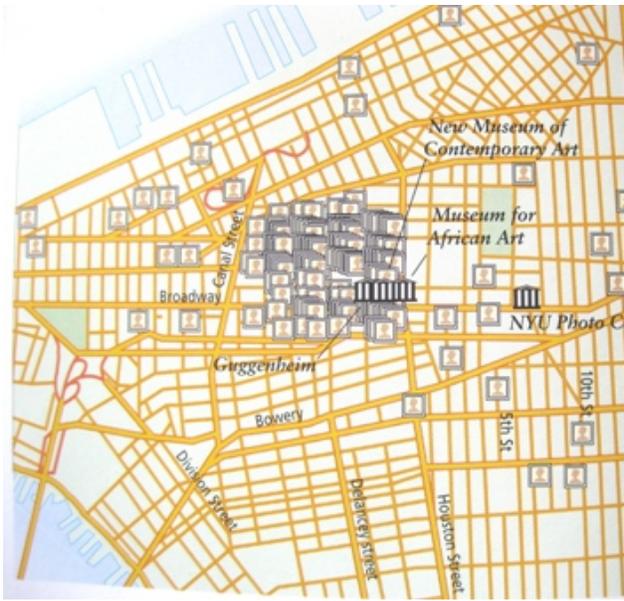
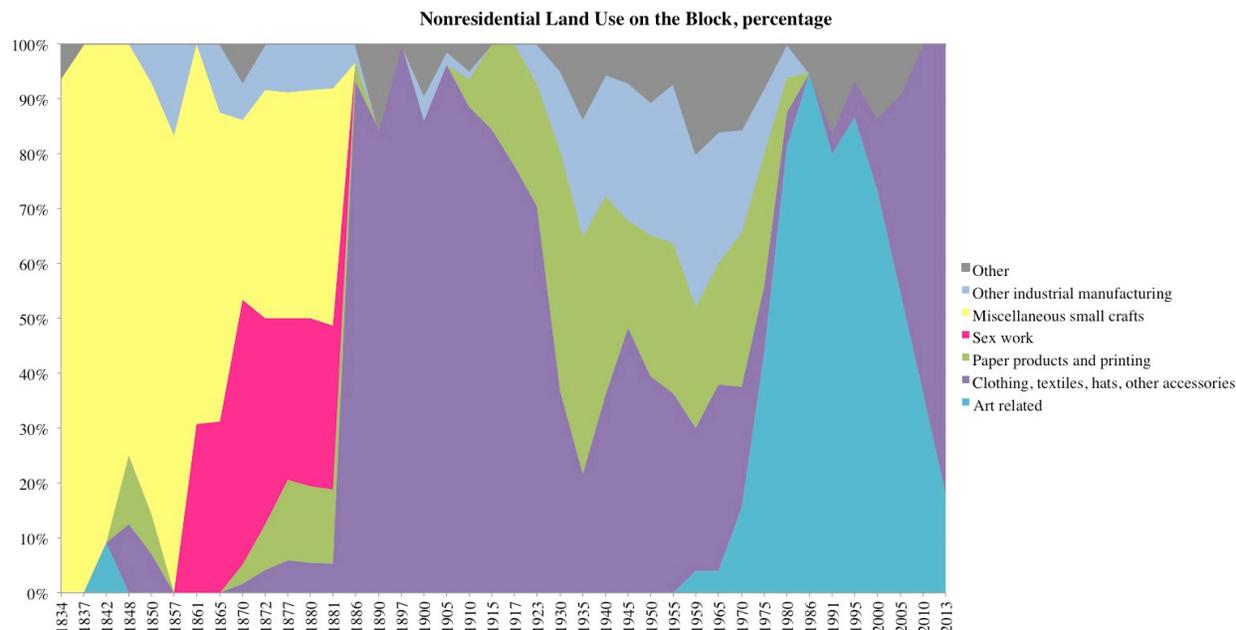


Figure 14: Soho's concentration of art galleries. Picture reproduced From Eric Homberger, *The Historical Atlas of New York City*

Meanwhile, the previous industrial occupants of the Greene Street were going out of business or moving. Greene Street followed the citywide trend of a decline in manufacturing.

Figure 15 shows the nonresidential sectoral shares on the block over the entire period 1834-2013. We see the previous eras of sex work, garment boom and bust, and then mixed industrial use during the "slum" period. After 1960, clothing, paper and printing, and other manufacturing disappear on the block as artist residents move in and grow in number, and galleries and other art-related businesses increase.

Figure 15 Non-residential composition of the block 1834-2013

The arrival of the artists and galleries, along with the designation of SoHo as a historic district in 1973, assured the survival of the buildings in SoHo. Margot Gayle, a force behind the designation and the founder of the Friends of Cast Iron Architecture, commented in the *New Yorker*: "It was lucky that the artists and sculptors started moving into the lofts here, because they attracted attention to the buildings and caused people for the first time in generations to see what lay back of the rust and grime and the general disrepair that hid their beauty. Often, it turns out that these buildings are the most valuable heritage a city has."

Gayle was right that the buildings, saved by the artists, would prove extremely valuable to the city as pieces of artistic heritage but also income-generating assets.

VII. The Present

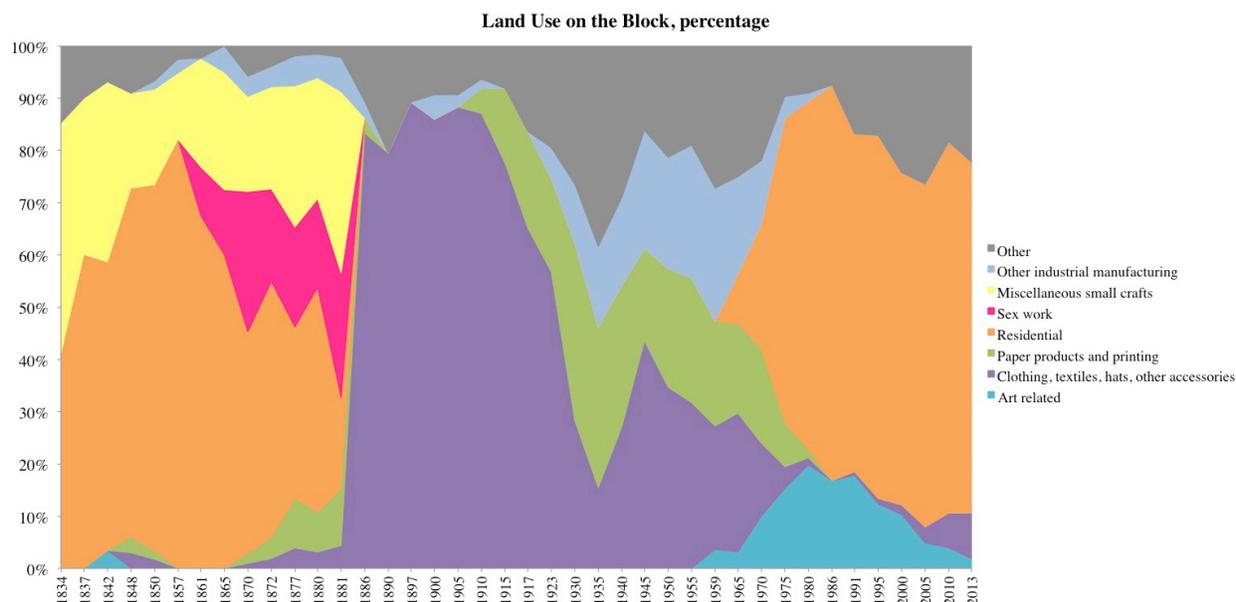
Surprise 6: An explosion in property prices as Greene St becomes one of NYC's premier luxury retail/residential areas.

Greene Street had still one more transition to bring it to the present. Figure 16 shows the spike in real estate value on the block ushered in by the artists. The high rents made possible by artists and art galleries drove out the artists and art galleries. A few artists still live in the cast iron buildings' upper floors in "rent-stabilized" apartments that their landlords are prohibited from selling to higher-paying tenants. But for the most part, artists were priced out of the neighborhood and moved on to wherever rents were cheap, space was plentiful, and artist congregated--Williamsburg, Brooklyn in the 1990s, or Bushwick today. Art galleries have been in decline on the block since the 1980s high point (see Figure 15 above again); they have moved to places with much lower rents, such as Chelsea and the Meat Packing district.

Figure 16: Real estate value of the block, 1830-2010, millions of 2012 dollars



The resident artists and galleries set the stage for the revival of the block as an upper class residential neighborhood after 1980 for the first time in more than a century. Figure 17 below shows the same data as in figure 15 above, but now including residential addresses. We can now see the surge by 1980 in the share of addresses occupied by residents. For the non-residential addresses in the block, the declining art galleries on the block were replaced mainly by clothing retail stores (Figure 15 above), returning the block to garments again a century after the first garment boom.

Figure 17: Land use on the block by sector, including residential

Hence today, the block has mainly luxury designer retail stores on the ground floors and residents on the upper floors. For example, the cast iron building at 133 Greene is a co-op, with its ground floor occupied by Christian Dior Homme. The residents on the upper floors are an international group of successful real estate professionals, businessmen, academics and architects. The last five units sold in the building had sale prices between \$2.5 and \$3 million.

The co-op allows purchases by limited liability corporations, which permits wealthy foreigners to buy these units as investments and avoid paying taxes on them as long as they live in New York for less than half the year, an increasingly common practice. Broker Siim Hanja, who lives at 133 Greene, observed, "It's a reflection of the changing times... It's not another artist who moves in when someone retires and moves upstate. It's someone from Italy with \$100 million net worth."⁶⁸

Among the ground floor tenants in 2014, high-end international chains predominate. Heavy traffic by shoppers and tourists for brands with more mass appeal on the Soho blocks of Broadway two blocks over seems to fuel a market for higher-end retail on parallel side streets like Greene. Today, Greene Street between Prince and Houston features luxury designer retail stores such as Ralph Lauren, Paul Smith, Alessi, Proenza Schouler, Dior, Costume National, Hugo Boss, Warby Parker, and the Apple Store, the latter located at the southern (downtown) end of the block. The block has become fashionable for shoppers, retailers, and residents alike, each reacting to each other.

In March 2014, several stories appeared in the media reporting that Google was going to open its first brick and mortar store on our block at 131 Greene Street. Regardless of whether the still-unconfirmed report is confirmed, the stories served as a snapshot of the block's current image: "Greene Street turns to

⁶⁸ <http://www.habitatmag.com/Publication-Content/2012/2012-April/Featured-Articles/Should-Co-op-Boards-Let-LLCs-Buy#.URV-DaU8B8E>

gold,” “the hottest block,” “a magnet for high-end shops and shoppers alike,” “the little Madison Avenue of SoHo,”⁶⁹ and that “Greene Street has become the street in Soho.”⁷⁰

These quotes are only illustrative, but judging by the solid data of real estate values of Figure 19, the block is more successful than ever before in its history.

VIII. Conclusion

The field of history moved some time ago from a studying mainly national units and national leaders to do instead bottom up histories of smaller units featuring ordinary people. This experimental case study of a very small unit tries something similar as an alternative to the usual national case studies for the economic history of development.

We see a pattern of recurrent surprises. The Dutch did not expect New York to thrive when they gave the Greene Street block to slaves and then gave up New York altogether in favor of Suriname (Surprise 1). The affluent residents of the block in 1830-1850 did not expect to be replaced by brothels (Surprise 2). The brothel owners, workers, and customers in 1880 were likely surprised to be replaced by a thriving garment industry (Surprise 3). The garment industry on the block did not expect the severe downturn after 1910 (Surprise 4). The urban planners in the 1940s and 1950s did not anticipate the block would explode in value again, first with art galleries (Surprise 5), and then even more with today’s luxury retail stores and residences (Surprise 6).

The high points according to the real estate value chart were the garment boom 1880-1910 and the real estate boom since 1970 to the present, today featuring Ralph Lauren, the Apple Store, and high-priced residential coops. These big successes contributed to the success of New York and even the United States, which is made up of many such small-unit successes.

Although we cannot directly measure TFP, it is one of the major determinants of value of the block, and so volatile land value is at least suggestive of large TFP volatility, at least partly driven by the surprises of creative destruction. The migration of particular sectors and sector-specific factors of production into and out of our block is suggestive of sector-specific TFP shocks that highlight the potential for misallocation across very small geographic units if there are any barriers to such mobility.

The smooth trends of success at larger units may require tolerating high volatility at much smaller units. Unlike US economic development, the block does not show a steady trend but a succession of rises and falls and rises, with the swings unpredictable and contingent on the interaction of many factors, some local, some citywide, some national, and some global. The block was built up, then torn down and rebuilt, then almost torn down again by city planners, then surviving to make possible today’s success. Our case study seems to suggest that anyone attempting prescriptive planning to address failure would not be able to anticipate these surprising swings between success and failure. If the prescriptive planners who sought to cure the block’s perceived failure in the 1940s through 1960s had succeeded, they would likely have prevented the success on the block from the 1970s through the present.

⁶⁹ http://www.crainsnewyork.com/article/20140310/REAL_ESTATE/140319988/greene-street-turns-to-gold-with-potential-new-tenant

⁷⁰ <http://www.bloomberg.com/news/2014-03-13/google-searches-for-space-in-nyc-s-soho-for-retail-store.html>

Of course, there are more flexible types of public planning that did take place and that contributed to the long-run success of the block – laying out street grids, providing water, sanitation, fire services and many other public services.

The high mobility of all factors except land made it possible for groups to match with each other to seize opportunities as they arose. German Jewish entrepreneurs matched with technology adapters copying Britain and labor provided by Russian Jewish and Italian immigrants to create the garment boom, with impetus from local and global transportation links to access distant markets. Artists in new art movements featuring large works revived the cast iron buildings left behind by the garment boom, attracting gallery owners, who set the stage for today's prosperous neighborhood matching luxury retail stores with international and national residents, tourists, and shoppers.

Freedom of people, ideas, technologies, finance, and goods to move within and across geographic units was arguably part of what made the block's dynamism possible. This freedom in turn made the block free to change spontaneously, reacting to other blocks with the same freedom all around it. The chaotic four-century history of this one city block may suggest that such spontaneous forces play a larger role in development than is usually assumed.

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